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STATISTICS OF WISCONSIN PUBLIC UTILITIES

1986-1985-1984

ELECTRIC, GAS, TELEPHONE
WATER AND HEATING UTILITIES

PUBLIC SERVICE COMMISSION OF WISCONSIN
Accounts and Finance Division

Bulletin No. 8

November, 1987

STATISTICS OF WISCONSIN PUBLIC UTILITIES

1986-1985-1984

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STATISTICS OF WISCONSIN PUBLIC UTILITIES

This bulletin presents a statistical summary of public utilities operating in Wisconsin during the period 1986-1984 inclusive. In addition, selected data over longer periods are shown in the text or portrayed in the charts. Some Wisconsin utilities have operations outside the State. These operations are generally excluded from the summaries but this was not possible in the case of financial data shown in Tables 1, 2, and 3.

The following table gives an indication of the relative importance of various utility services included in the report.

	Year Ending December 31, 1986		
	Average Number of Customers**	Operating Revenues*	Net Operating Revenues*
Electric	1,941,831	\$2,540,062,750	\$415,031,737
Gas	1,130,064	1,355,742,190	57,063,072
Telephone	2,285,772	1,361,070,762	258,720,179
Water	977,144	182,941,917	27,819,199
Heating	578	11,966,842	1,259,972
		\$5,451,784,461	\$759,894,159

* Excludes out-of-state operations.

Ultimate consumers.

Chart 1 presents a comparison of trends in gross operating revenue since 1977. Gas utility revenues increased by 95% in 9 years. Electric and telephone revenues increased 108% and 97% respectively while water revenues rose 88% during the 9-year period.

Chart 2 shows that since 1977, net operating telephone revenues have risen 101%, electric revenues 108%, water revenues 169% and gas revenues 17%.

CHART 1

COMPARATIVE TRENDS OF OPERATING REVENUES

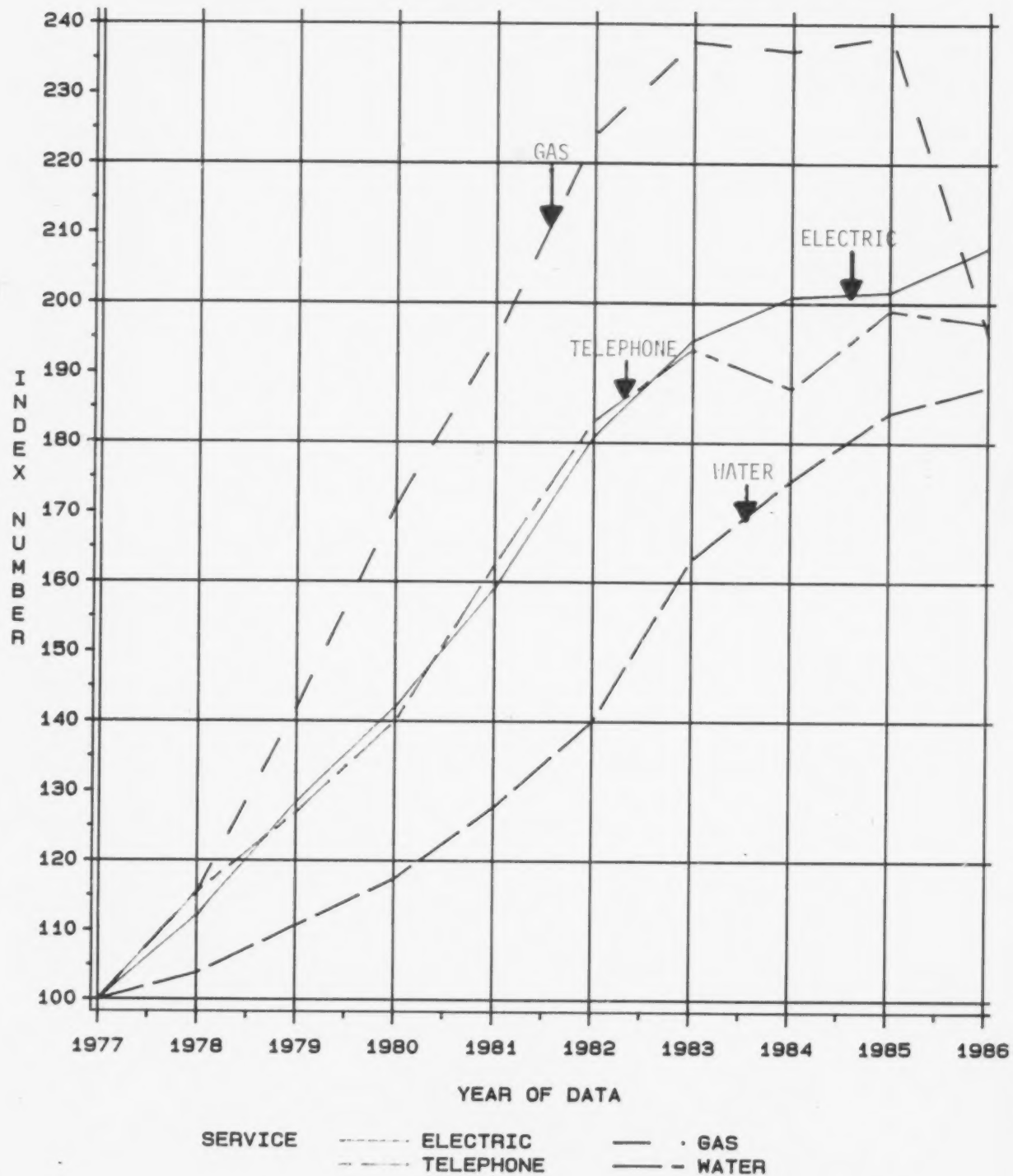
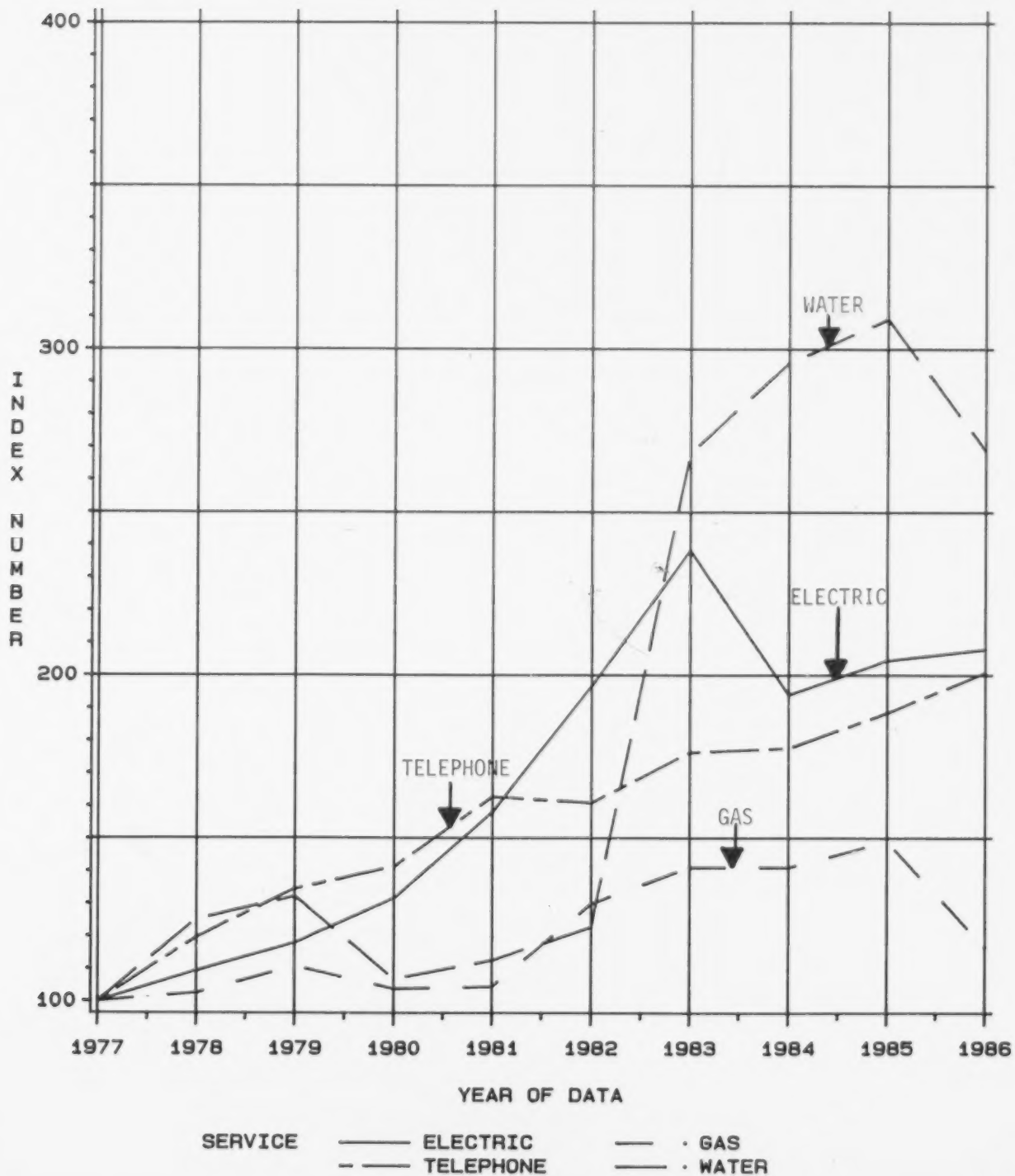


CHART 2
COMPARATIVE TRENDS OF NET OPERATING REVENUES



The number of public utilities operating in the State as of December 31, 1986 is summarized below. These figures include all utilities regardless of size.

	Total	Private	Municipal
	-----	-----	-----
Electric	97	13	84
Gas	16	15	1
Telephone	99*	99*	0
Water	555	12	543
Heating	2	1	1
	-----	-----	-----
Total	769	140	629

* There are four resellers still being investigated relative to certification as alternative telecommunications utilities and there are five telephone companies offering resale of MTS and WATS within their telephone franchise areas. There are, at this time approximately 21 resellers, approximately 21 answering service companies and two cellular mobile companies which are operating as alternative telecommunications utilities per 05-TI-106.

Statistics on plant investment, capitalization and disposition of income are presented in this section of the bulletin. These data necessarily include all operations of Wisconsin utilities, including out-of-state operations of those utilities operating in neighboring states.

A number of municipalities include nonutility sewer operations in their water utility reports. Figures on income and capitalization reflect these operations when reported. It is to be emphasized, however, that sewer coverage presented herein is by no means complete since many municipalities operate their non-utility sewer departments independently and do not report those operations.

Utility Plant in Service and Accumulated Provisions for Depreciation:

Table 1 presents a summary of utility plant in service and accumulated provisions for depreciation of Wisconsin utilities during the period from 1984 through 1986. Charts 3, 4 and 5 show similar data in graphic form over the past 9 years.

About \$12.8 billion are invested in utility plant by Wisconsin utilities. Of this amount, electric plant makes up 49.9% with telephone, water and gas plant amounting to 28.8%, 9.5% and 9.7% respectively. Sewer and heating plant make up another 2.1%.

Electric cooperatives and companies engaged in intrastate transmission of natural gas do not fall under the jurisdiction of the Wisconsin Public Service Commission and therefore, data covering these companies are not included in this study. Electric cooperatives did have gross plant investment in Wisconsin of about \$782 million as of December 31, 1986. Gas pipeline companies had about \$261.1 million in gross plant as of the same date.

Except for water and sewer service, public utility operations in Wisconsin are predominantly under private management. For example, municipalities own and operate 98% of the total water plant but only 4% of the electric plant, about 0.05% of the gas distribution plant and no telephone plant.

As of December 31, 1986, Wisconsin electric utilities had accumulated provisions for depreciation equal to 46% of electric plant in service. Telephone utilities had accumulated 34%, water utilities 22% and gas utilities 46%. The comparable figures in 1977 were 38%, 22%, 19% and 31% respectively.

Charts 3, 4, 5 and 6 show that utility plant in service has increased steadily over the past 9 years. Electric utility plant has increased 99% since 1977. Telephone plant is up 62% while water and gas plant increased 53% and 56% for the period.

Capitalization:

Capitalization of public utilities in Wisconsin is summarized in Table 2 and Charts 7 and 8. Total capitalization was about \$8,325 million in 1986. Of that amount 80% was accounted for by private utilities with the remaining 20% being municipal investment.

Total capitalization was up 5.2% over 1985, and 33% over the past 10 years. Corresponding figures are 5.3% and 25% for private utilities and 4.9 and 78% for municipals. Charts 7 and 8 give graphic representation of these figures.

CHART 3
UTILITY PLANT IN SERVICE
AND ACCUMULATED PROVISION FOR DEPRECIATION
ELECTRIC UTILITIES

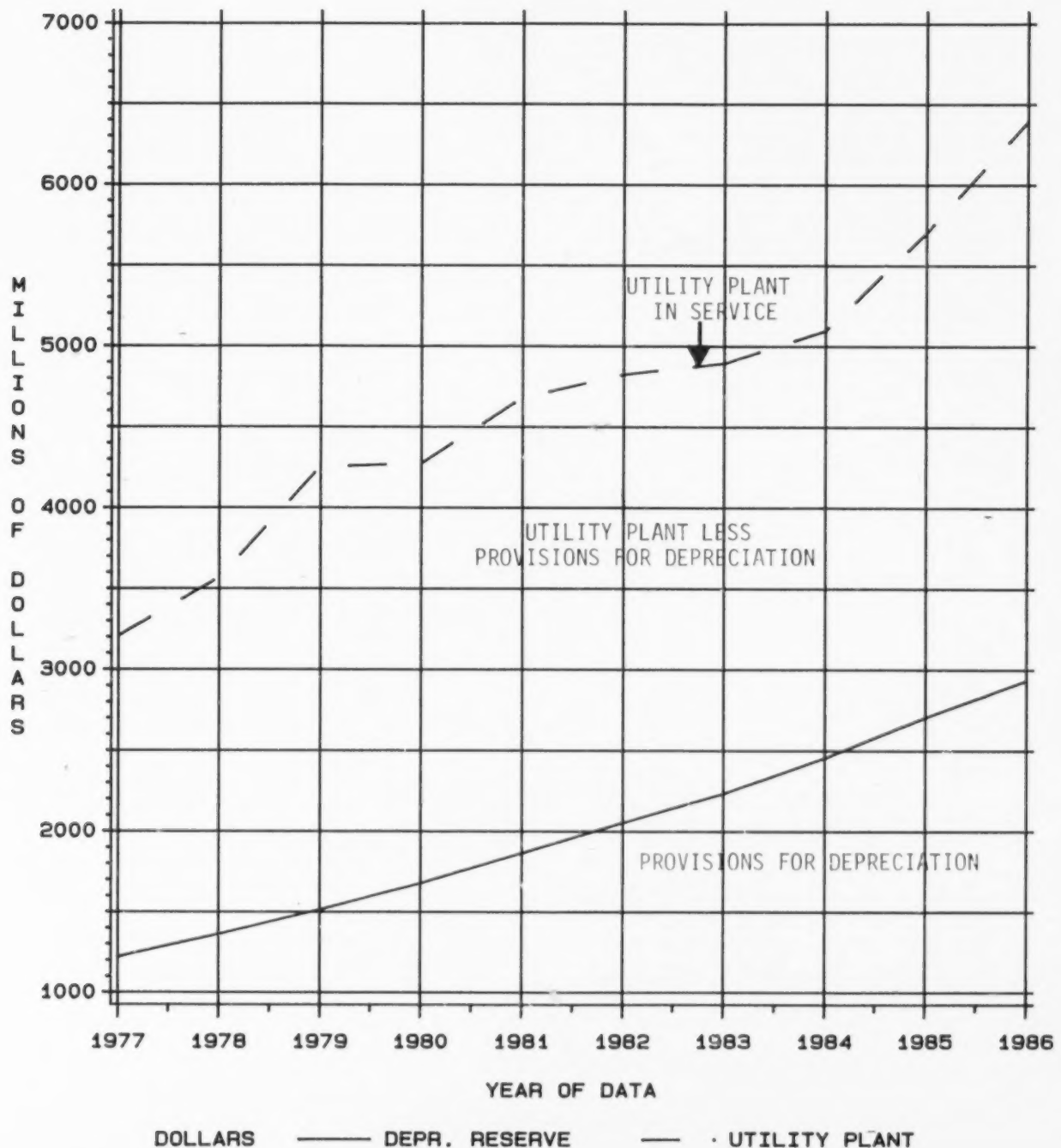


CHART 4
UTILITY PLANT IN SERVICE
AND ACCUMULATED PROVISION FOR DEPRECIATION
TELEPHONE UTILITIES

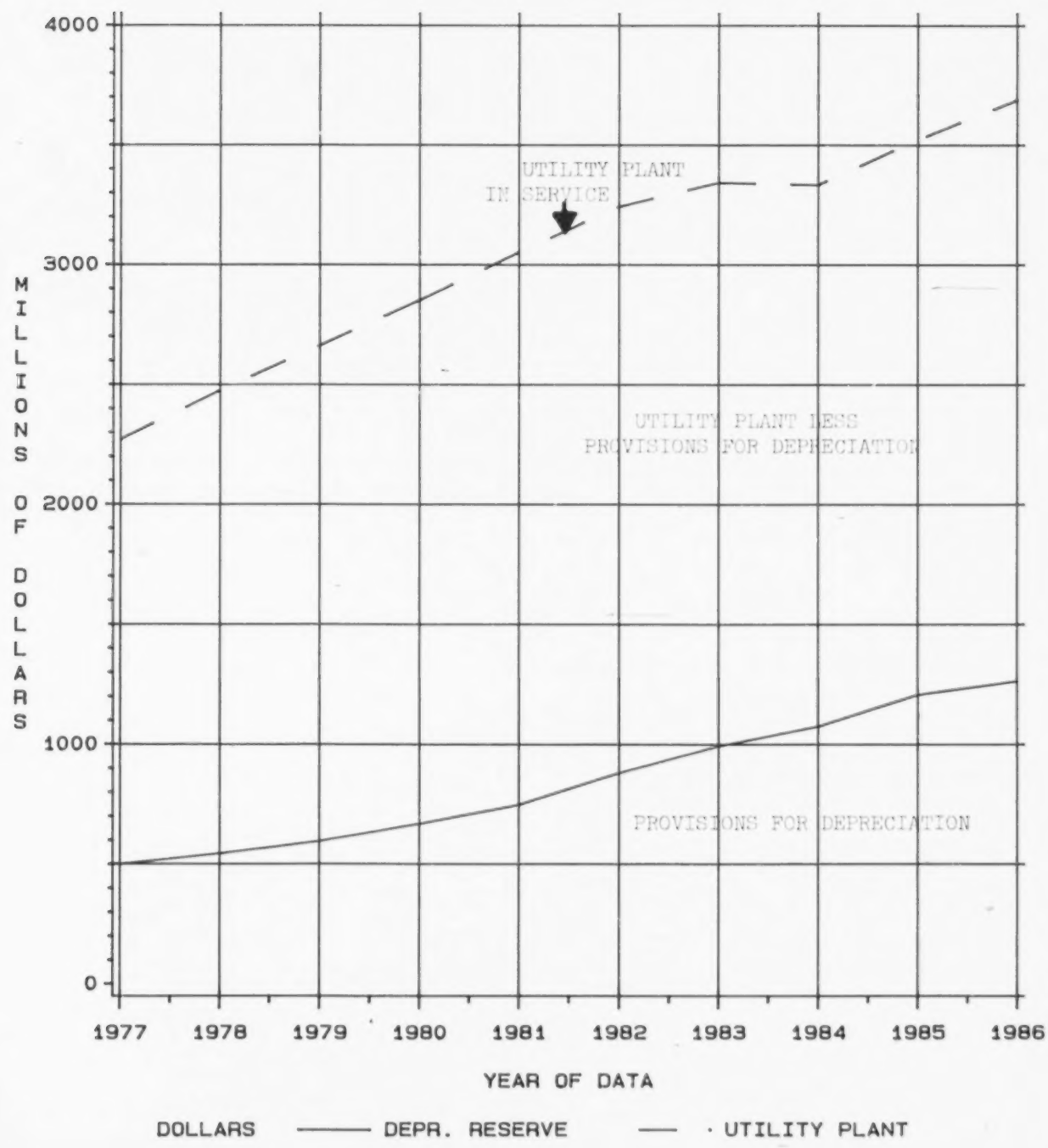


CHART 5
UTILITY PLANT IN SERVICE
AND ACCUMULATED PROVISION FOR DEPRECIATION
WATER UTILITIES

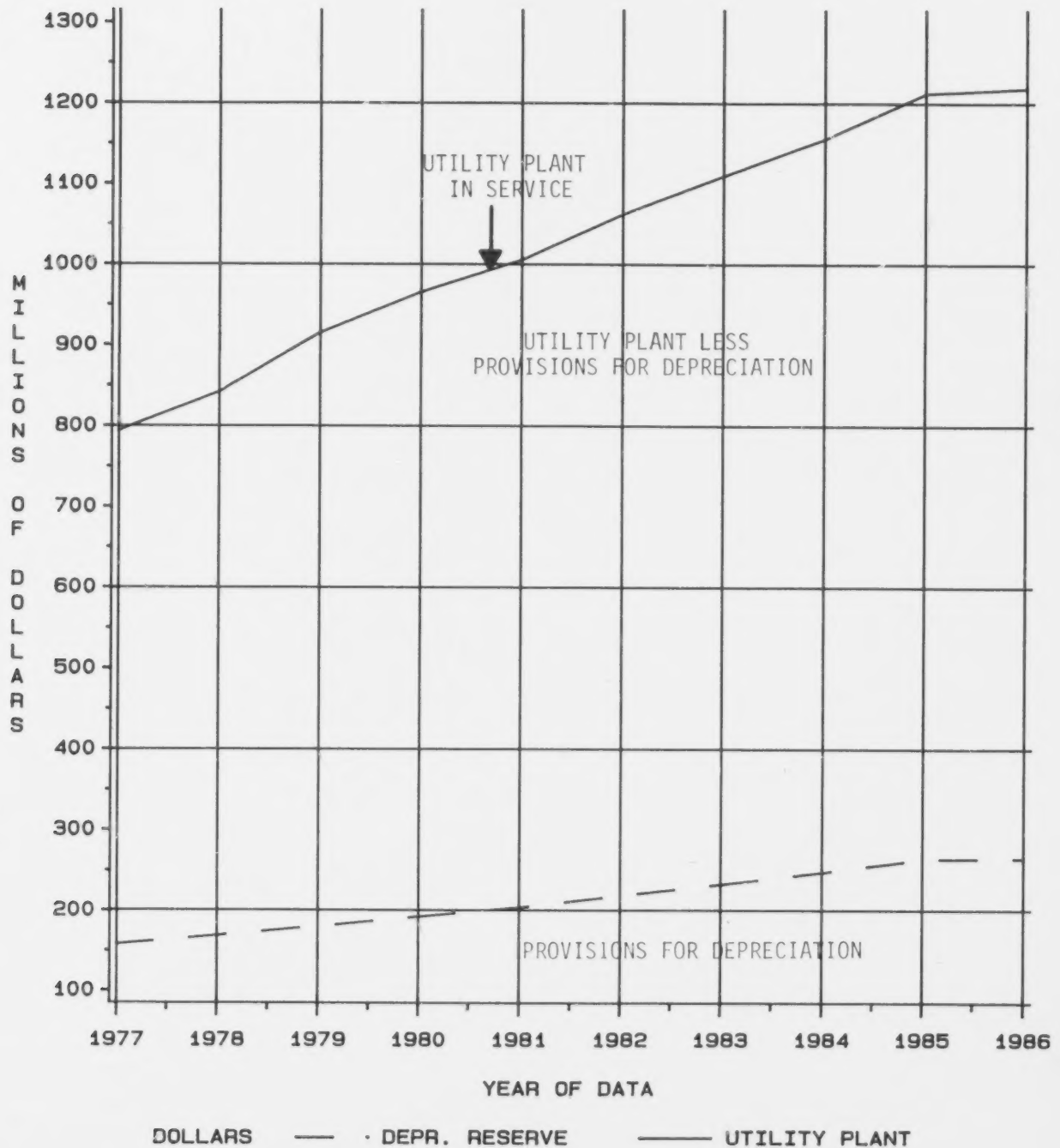
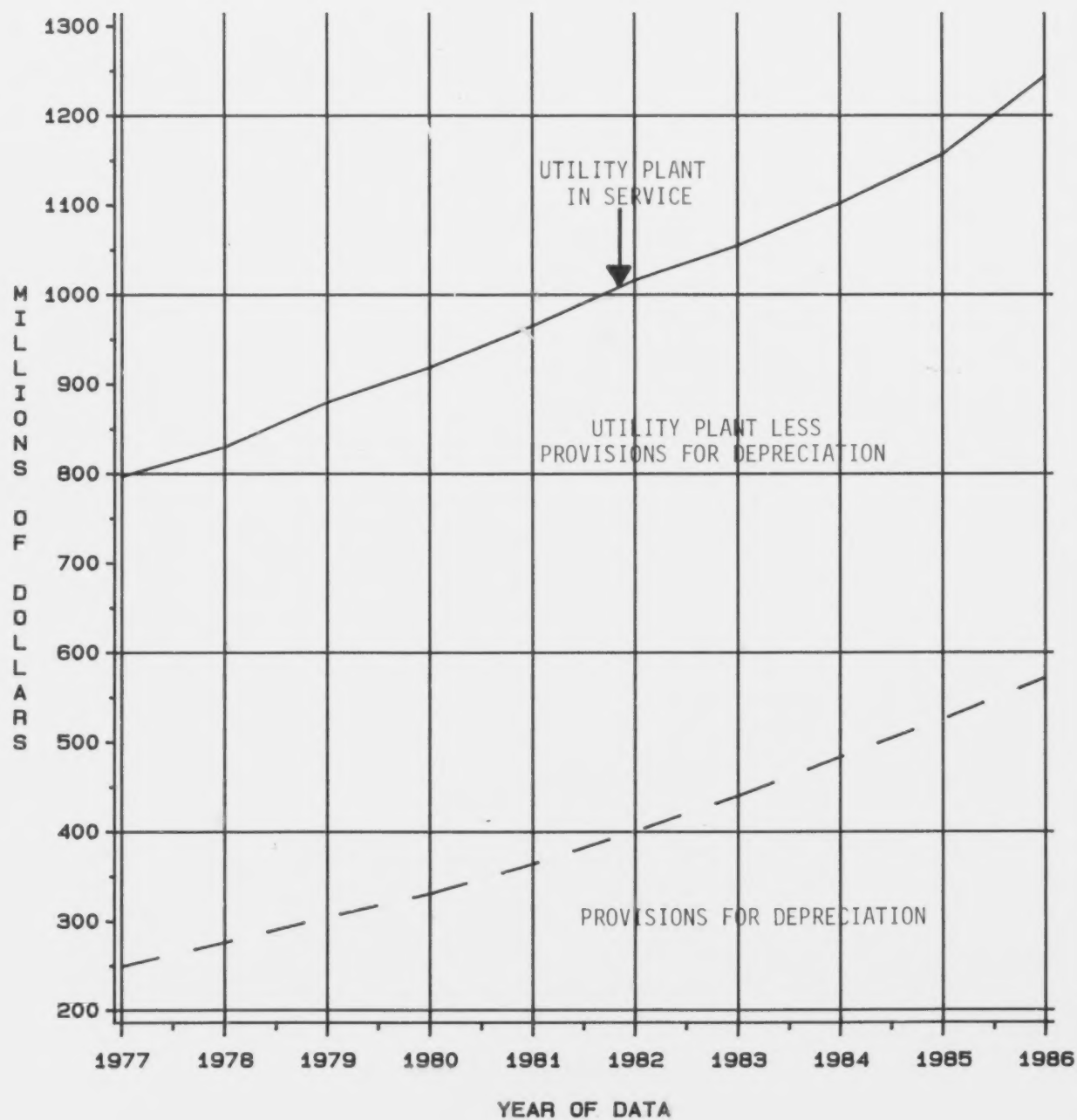


CHART 6

UTILITY PLANT IN SERVICE AND ACCUMULATED PROVISION FOR DEPRECIATION GAS UTILITIES



DOLLARS

— DEPR. RESERVE

— UTILITY PLANT

CHART 7
CAPITALIZATION OF PRIVATE UTILITIES
OPERATING IN WISCONSIN

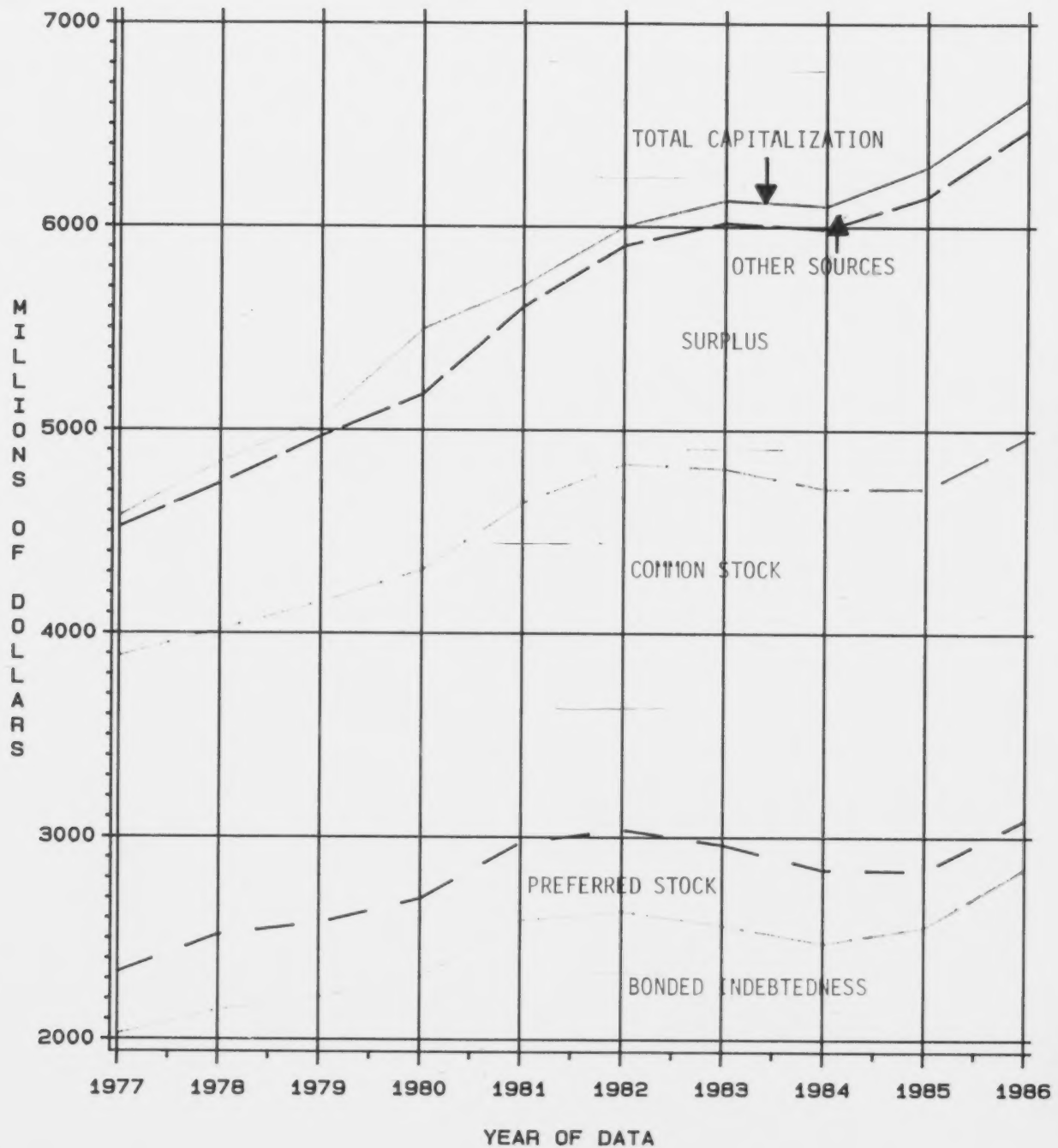


CHART 8
CAPITALIZATION OF MUNICIPAL UTILITIES
OPERATING IN WISCONSIN

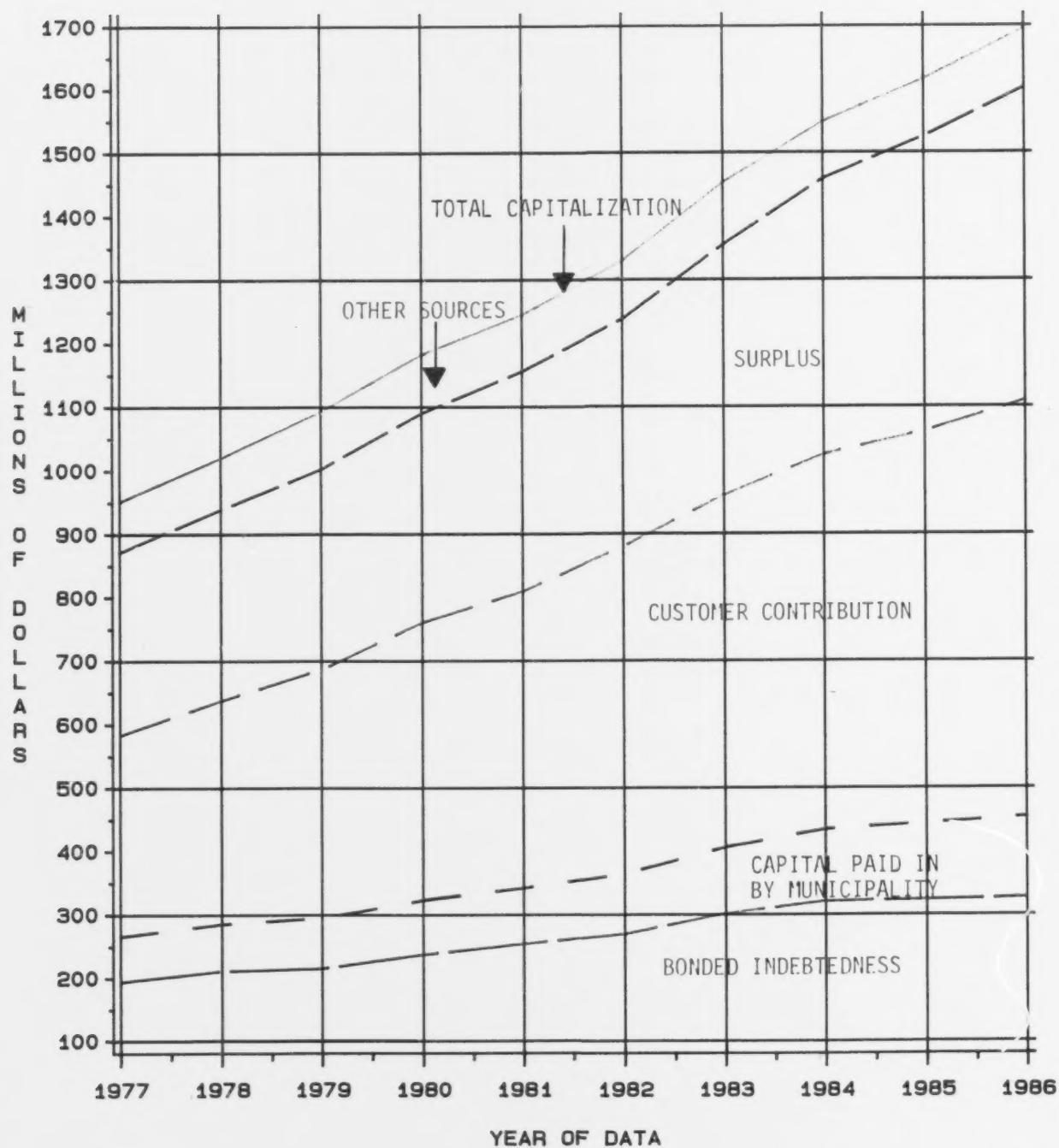


Chart 7 further shows bonds and common stock continue to be the largest source of capital for private utilities. Surplus also contributes a substantial share of total capitalization.

As shown below, Contributions in Aid of Construction is the largest item of municipal utility Capitalization. Surplus and Bonded Debt are next in size. Capital Paid in by Municipalities was only about 7.5% of the total at the end of 1986.

A comparison of the capitalization of private and municipal utilities as of December 31, 1986 is presented below:

	Private Utilities	Municipal Utilities
Bonded Indebtedness	42.9%	19.3%
Common Stock or Capital Paid in by Municipality	28.4	7.5
Preferred Stock	3.6	0.0
Surplus	22.8	29.0
Advances from Affiliates or Municipalities	0.3	5.4
Contributions in Aid of Construction	1.6	38.6
Customer Advances in Aid of Construction	0.4	0.2
Total	100.0%	100.0%

Disposition of Income

The term 'gross income' as used here, is a net figure representing total income available to meet interest payments, dividends and similar items. The disposition of gross income is summarized in Table 3 and Charts 9 and 10.

Total gross income of private utilities in Wisconsin totaled \$788.7 million in 1986, 5.6% above the preceding year. Interest and related deductions absorbed \$243.0 million, preferred stock dividends \$19.5 million, dividends on common stock \$357.5 million, and \$168.6 million were carried to surplus.

Municipal utilities had \$53.4 million in gross income in 1986, down 12.2% from the preceding year. Interest and related charges amounted to \$28.7 million, \$2.9 million were appropriated to municipalities, and \$21.9 million were carried to surplus.

Payments during 1986 on each class of security or equity, expressed as a percent of average book values at the beginning and close of the year are compared below:

	Private Utilities	Municipal Utilities
Interest on Long-Term Debt Divided by Long-Term Debt	7.39%	7.39%
Preferred Stock Dividends Divided by Preferred Stocks	8.15	0.00
Common Stock Dividends Divided by Common Stock	19.01	0.00
Appropriations to City Divided by Capital Paid in by Municipality	0.0	2.26
Common Stock Dividends Divided by Common Stock Plus Surplus	10.45	0.00
Appropriations to City Divided by Capital Paid in by Municipality Plus Surplus	0.00	0.46

CHART 9
DISPOSITION OF GROSS INCOME
PRIVATE UTILITIES OPERATING IN WISCONSIN

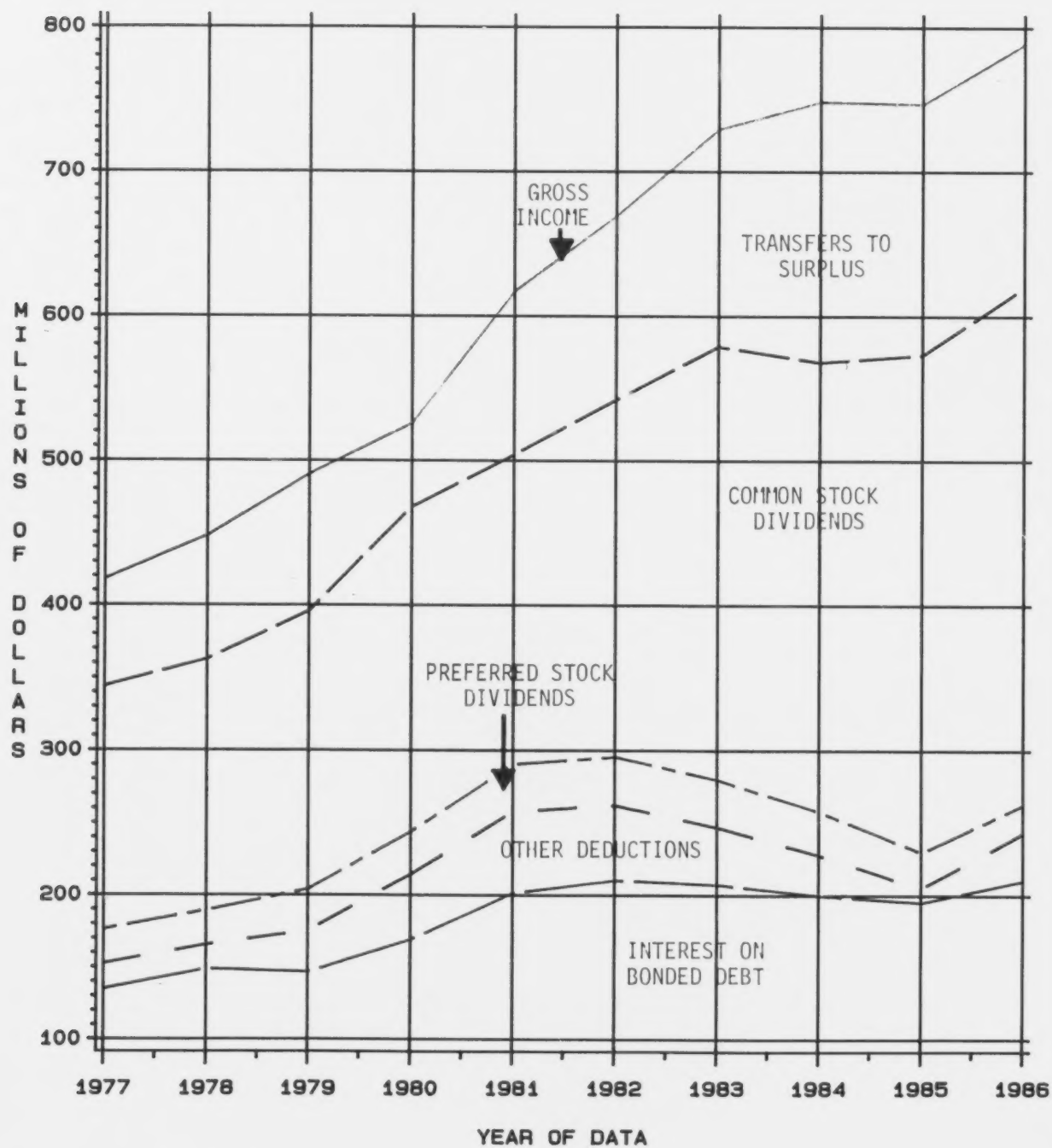


CHART 10
DISPOSITION OF GROSS INCOME
MUNICIPAL UTILITIES OPERATING IN WISCONSIN

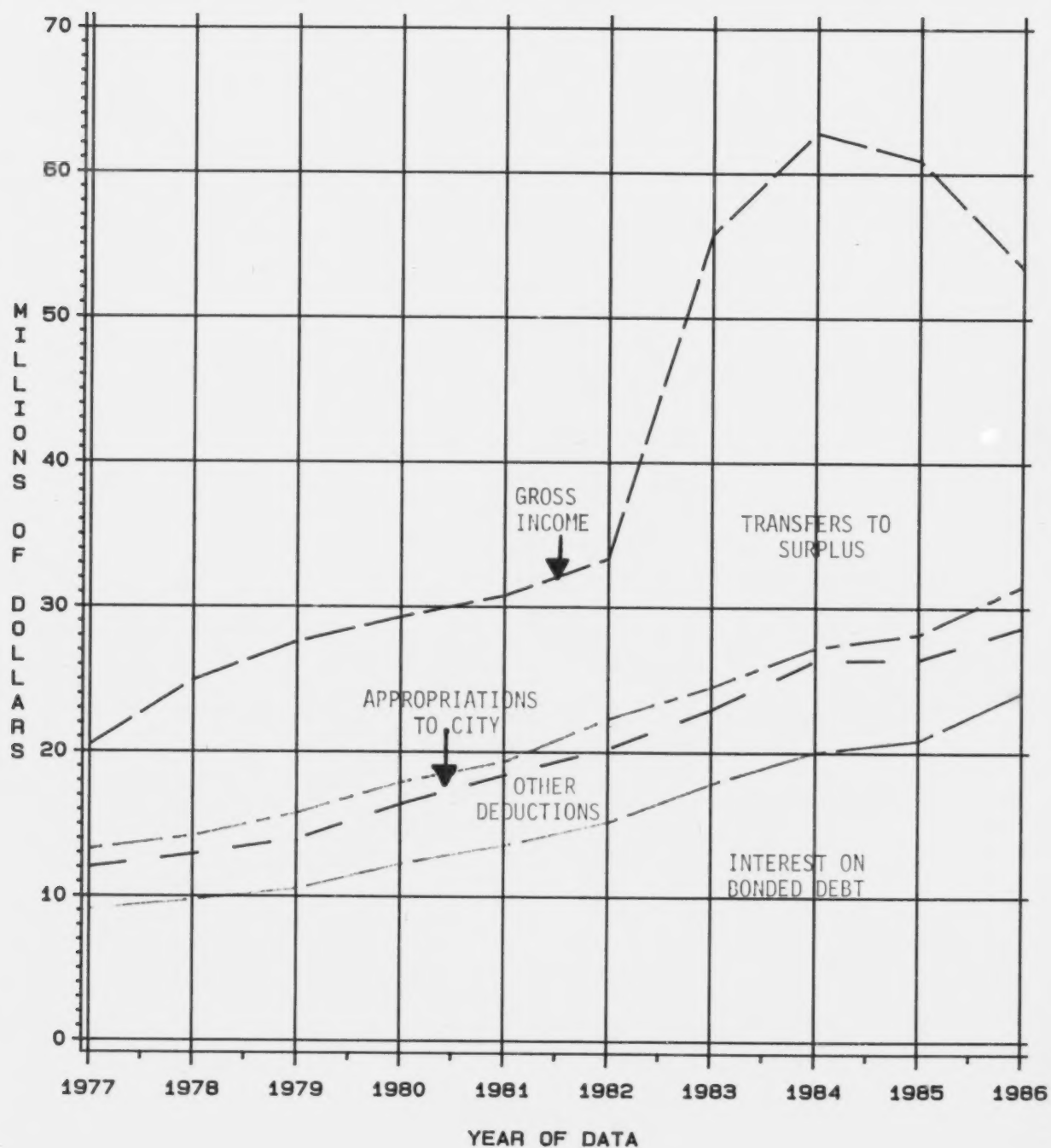


TABLE 1
SUMMARY OF UTILITY PLANT IN SERVICE AND
ACCUMULATED PROVISION FOR DEPRECIATION
PUBLIC UTILITIES OPERATING IN WISCONSIN 1/
1986-1984

All Utilities	Dec. 31, 1986	Dec. 31, 1985	Dec. 31, 1984
Utility Plant in Service 2/ 3/			
Electric	\$ 6,390,741,879	\$ 5,703,684,631	\$ 5,096,541,627
Gas	1,243,722,101	1,156,585,706	1,102,299,899
Water	1,218,413,206	1,212,267,535	1,155,945,181
Sewer	246,780,185	192,198,158	191,559,192
Telephone	3,687,800,000	3,523,067,379	3,333,427,954
Heating	26,331,551	22,346,770	21,133,591
Total	\$12,813,788,922	\$11,810,150,179	\$10,900,907,444
Accumulated Provision for Depreciation 2/ 3/			
Electric	\$ 2,934,027,443	\$ 2,705,477,425	\$ 2,455,053,864
Gas	571,794,725	525,720,253	483,319,376
Water	264,758,391	263,947,466	247,785,262
Sewer	39,498,665	30,762,481	26,728,087
Telephone	1,263,400,000	1,206,971,869	1,074,457,991
Heating	11,804,001	10,547,264	9,968,155
Total	\$ 5,085,283,225	\$ 4,743,426,758	\$ 4,297,312,735
Utility Plant Less Provision For Depreciation 2/ 3/			
Electric	\$ 3,456,714,436	\$ 2,998,207,206	2,641,487,763
Gas	671,927,376	630,865,453	618,980,523
Water	953,654,815	948,320,069	908,159,919
Sewer	207,281,520	161,435,677	164,831,105
Telephone	2,424,400,000	2,316,095,510	2,258,969,963
Heating	14,527,550	11,799,506	11,165,436
Total	\$ 7,728,505,697	\$ 7,066,723,421	\$ 6,603,594,709
Private Utilities			
Utility Plant in Service 2/ 3/			
Electric	\$ 6,120,494,505	\$ 5,455,740,086	4,864,313,138
Gas	1,243,087,586	1,155,972,095	1,101,707,722
Water	25,068,725	20,621,782	20,363,053
Sewer	0	0	0
Telephone	3,687,800,000	3,523,067,379	3,333,427,954
Heating	26,018,158	22,039,837	20,826,651
Total	\$11,102,468,974	\$10,177,441,179	\$ 9,340,638,518

TABLE 1 (Concluded)

SUMMARY OF UTILITY PLANT IN SERVICE AND
ACCUMULATED PROVISION FOR DEPRECIATION
PUBLIC UTILITIES OPERATING IN WISCONSIN 1/
1986-1984

Private Utilities (Cont.)	Dec. 31, 1986	Dec. 31, 1985	Dec. 31, 1984
Accumulated Provision for Depreciation 2/ 3/			
Electric	\$ 2,813,754,622	\$ 2,592,168,035	\$ 2,348,174,673
Gas	571,535,933	525,480,857	483,099,107
Water	7,069,349	6,625,245	6,098,037
Sewer	0	0	0
Telephone	1,263,400,000	1,206,971,869	1,074,457,991
Heating	11,758,010	10,508,033	9,936,586
Total	\$ 4,667,517,914	\$ 4,341,754,039	\$ 3,921,766,394
Utility Plant Less Provision For Depreciation 2/ 3/			
Electric	\$ 3,306,739,883	\$ 2,863,572,051	\$ 2,516,138,465
Gas	671,551,653	630,491,238	618,608,615
Water	17,999,376	13,996,537	14,265,016
Sewer	0	0	0
Telephone	2,424,400,000	2,316,095,510	2,258,969,963
Heating	14,260,148	11,531,804	10,890,065
Total	\$ 6,434,951,060	\$ 5,835,687,140	\$ 5,418,872,124
Municipal Utilities			
Utility Plant in Service 2/			
Electric	\$ 270,247,374	\$ 247,944,545	\$ 232,228,489
Gas	634,515	613,611	592,177
Water	1,193,344,481	1,191,645,753	1,135,582,128
Sewer	246,780,185	192,198,158	191,559,192
Heating	313,393	306,933	306,940
Total	\$ 1,711,319,948	\$ 1,632,709,000	\$ 1,560,268,926
Accumulated Provision for Depreciation 2/			
Electric	\$ 120,272,821	\$ 113,309,390	\$ 106,879,191
Gas	258,792	239,396	220,269
Water	257,689,042	257,322,221	241,687,225
Sewer	39,498,665	30,762,481	26,728,087
Heating	45,991	39,231	31,569
Total	\$ 417,765,311	\$ 401,672,719	\$ 375,546,341
Utility Plant Less Provision for Depreciation 2/			
Electric	\$ 149,974,553	\$ 134,635,155	\$ 125,349,298
Gas	375,723	374,215	371,908
Water	935,655,439	934,323,532	893,894,903
Sewer	207,281,520	161,435,677	164,831,105
Heating	267,402	267,702	275,371
Total	\$ 1,293,554,637	\$ 1,231,036,281	\$ 1,184,722,585

1/ Total plant includes out-of-state properties.

2/ Including apportionment of common property.

3/ Excluding utility plant leased to others.

TABLE 2

COMPARATIVE STATEMENT OF CAPITALIZATION
PUBLIC UTILITIES OPERATING IN WISCONSIN 1/
1986-1984

	Dec. 31, 1986	Dec. 31, 1985	Dec. 31, 1984
All Utilities			
Long-Term Debt Outstanding	\$ 3,173,780,135	\$ 2,883,415,778	\$ 2,798,262,363
Advances from Affiliates or Municipality	111,211,671	108,383,135	87,663,143
Preferred Stock Outstanding	239,534,320	275,323,300	362,666,600
Common Stock Outstanding and Related Accounts	1,880,459,696	1,877,916,213	1,872,020,988
Capital Paid in by Municipality	126,758,156	120,160,248	112,775,624
Surplus	2,003,892,397	1,900,714,052	1,709,201,493
Customers' Advances in Aid of Construction	28,671,084	25,453,402	21,171,216
Contributions in Aid of Construction	760,348,795	719,689,717	687,356,712
Total	\$ 8,324,656,254	\$ 7,911,055,845	\$ 7,651,118,139
Private Utilities			
Long-Term Debt Outstanding	\$ 2,846,439,763	\$ 2,559,597,913	\$ 2,476,732,672
Advances from Affiliates	20,005,000	20,010,000	10,000
Preferred Stock Outstanding	239,534,320	275,323,300	362,666,600
Common Stock Outstanding and Related Accounts	1,880,459,696	1,877,916,213	1,872,020,988
Surplus	1,511,923,562	1,437,593,845	1,276,004,924
Customers' Advances in Aid of Construction	25,854,039	22,619,149	18,419,767
Contributions in Aid of Construction	104,481,697	101,864,769	96,245,847
Total	\$ 6,628,698,077	\$ 6,294,925,189	\$ 6,102,100,798
Municipal Utilities			
Long-Term Debt Outstanding	\$ 327,340,372	\$ 323,817,865	\$ 321,529,691
Advances from Municipality	91,206,671	88,373,135	87,653,143
Capital Paid in by Municipality	126,758,156	120,160,248	112,775,624
Surplus	491,968,835	463,120,207	433,196,569
Customers' Advances in Aid of Construction	2,817,045	2,834,253	2,751,449
Contributions in Aid of Construction	655,867,098	617,824,948	591,110,865
Total	\$ 1,695,958,177	\$ 1,616,130,656	\$ 1,549,017,341

1/ These data necessarily represent total company figures. A few companies operate outside of Wisconsin. Electric, gas, water, sewer, heating and telephone utilities are included.

TABLE 3
DISPOSITION OF INCOME
PUBLIC UTILITIES OPERATING IN WISCONSIN 1/
1986-1984

	1986	1985	1984
All Utilities			
Net Operating Revenues			
Electric	\$412,920,969	\$395,802,509	\$381,537,125
Gas	61,448,213	78,600,217	74,289,453
Telephone	258,720,180	242,874,710	228,953,942
Water	27,819,199	32,015,522	30,628,045
Sewer	1,858,216	2,841,648	1,682,330
Steam and Hot Water Heating	1,259,972	1,311,557	1,537,986
Total	\$764,026,749	\$753,446,163	\$718,628,881
Income from Plant Leased to Others	\$ 8,439	\$ 57,266	\$ 105,899
Income from Merchandising and Jobbing	298,870	205,027	352,997
Other Income - Net	77,798,232	53,938,862	92,110,532
Gross Income	\$842,132,290	\$807,647,318	\$811,198,309
Interest on Long-Term Debt	\$234,399,311	\$215,824,653	\$219,712,036
Amortization of Debt Discount and Premium	2,836,131	2,607,509	2,758,651
Interest on Debt to Associated Companies or City	9,566,891	8,480,273	7,365,264
Other Deductions	24,900,564	4,311,071	24,340,231
Net Income	\$570,429,393	\$576,423,812	\$557,022,127
Dividend Appropriations on Preferred Stock	\$ 19,516,256	\$ 24,670,196	\$ 29,851,244
Dividend Appropriations on Common Stock 2/	357,540,268	343,720,435	310,256,398
Appropriations to City	2,863,974	1,744,201	899,854
Balance Transferred to Surplus	\$190,508,895	\$206,288,980	\$216,014,631

(Continued)

TABLE 3 (Continued)

DISPOSITION OF INCOME
PUBLIC UTILITIES OPERATING IN WISCONSIN 1/
1986-1984

	1986	1985	1984
Private Utilities			
Net Operating Revenues			
Electric	\$405,647,466	\$387,899,602	\$371,666,576
Gas	61,450,170	78,556,270	74,269,115
Telephone	258,720,180	242,874,710	228,953,942
Water	1,357,420	1,311,966	1,130,201
Sewer	0	0	0
Steam and Hot Water Heating	1,258,926	1,309,177	1,530,473
Total	\$728,434,162	\$711,951,725	\$677,550,307
Income from Plant Leased to Others	\$ 7,539	\$ 56,366	\$ 102,599
Income from Merchandising and Jobbing	14,746	25,929	113,307
Other Income - Net	60,207,284	34,731,734	70,632,261
Gross Income	\$788,663,731	\$746,765,754	\$748,398,474
Interest on Long-Term Debt	\$210,223,272	\$194,955,479	\$199,661,383
Amortization of Debt Discount and Premium	1,855,118	1,697,219	2,017,598
Interest on Debt to Associated Companies	4,145,188	2,894,186	2,134,389
Other Deductions	26,801,984	5,238,778	24,023,591
Net Income	\$545,638,169	\$541,980,092	\$520,561,513
Dividend Appropriations on Preferred Stock	\$ 19,516,256	\$ 24,670,196	\$ 29,851,244
Dividend Appropriations on Common Stock 2/	357,540,268	343,720,435	310,256,398
Balance Transferred to Surplus	\$168,581,645	\$173,589,461	\$180,453,871

TABLE 3 (Concluded)

DISPOSITION OF INCOME
PUBLIC UTILITIES OPERATING IN WISCONSIN 1/
1986-1984

	1986	1985	1984
Municipal Utilities			
Net Operating Revenue			
Electric	\$ 7,273,503	\$ 7,902,907	\$ 9,870,549
Gas	(1,957)	43,947	20,338
Water	26,461,779	30,703,556	29,497,844
Sewer	1,858,216	2,841,648	1,682,330
Steam and Hot Water Heating	1,046	2,380	7,513
Total	\$35,592,587	\$41,494,438	\$41,078,574
Income from Plant Leased to Others	\$ 900	\$ 900	\$ 3,300
Income from Merchandising and Jobbing	284,124	179,098	239,690
Other Income - Net	17,590,948	19,207,128	21,478,271
Gross Income	\$53,468,559	\$60,881,564	\$62,799,835
Interest on Long-Term Debt	\$24,176,039	\$20,869,174	\$20,050,653
Amortization of Debt Discount and Premium	981,013	910,290	741,053
Interest on Debt to City	5,421,703	5,586,087	5,230,875
Other Deductions	(1,901,420)	(927,707)	316,640
Net Income	\$24,791,224	\$34,443,720	\$36,460,614
Appropriations to City	\$ 2,863,974	\$ 1,744,201	\$ 899,854
Balance Transferred to Surplus	\$21,927,250	\$32,699,519	\$35,560,760

1/ Includes out-of-state operations of Wisconsin utilities.

2/ Excluding Stock Dividends.

ELECTRIC UTILITY STATISTICS

Comparative statistics of Wisconsin electric utilities for the 3-year period, 1984 to 1986, are summarized in this section. Out-of-state operations are excluded (except in tables 7, 8 and 9 where data on out-of-state sales, purchases and generating plant are presented).

The following tables and charts present the data covering electric utility operations:

- Table 4 - Comparative Statement of Revenues and Expenses, 1986-1984
- Table 5 - Sales to Ultimate Consumers, 1986-1984
- Table 6 - Comparative Statement of Operating Expenses, 1986-1984
- Table 7 - Summary of Megawatt Hours Sold and Used, 1986-1984
- Table 8 - Megawatt Hours Generated and Purchased, 1986-1984
- Table 9 - Generating Plant, Substation and Transmission Line Data, 1986-1984
- Table 10 - Condensed Summary of 1986 Operations - Individual Private Electric Utilities
- Table 11 - Condensed Summary of 1986 Operations - Individual Municipal Electric Utilities
- Chart 11 - Residential Electric Customers - Annual Kilowatt Hour Sales Wisconsin and United States, 1977-1986
- Chart 12 - Residential Electric Customers - Revenue per Kilowatt Hour Wisconsin and United States, 1977-1986
- Chart 13 - Residential Electric Customers - Average Annual Bill Wisconsin and United States, 1977-1986
- Chart 14 - Comparison of Revenues and Expenses, Wisconsin Electric Utilities, 1977-1986
- Chart 15 - Revenues from Sales to Ultimate Consumers by Individual Wisconsin Electric Utilities, Percent of Total, 1986

Electric Consumers

The total number of ultimate (retail) electric consumers increased 1.27% over 1985. Residential customers increased 1.06% and rural customers increased 2.24%. Commercial and industrial customers increased 1.60%.

As has already been pointed out, electric cooperatives are not included in the tables. These organizations served an estimated 170,815 customers during 1986. This was 54% of all rural electric customers served in the state.

Revenue and Consumption Ratios

Kilowatt hours sold to ultimate consumers in Wisconsin increased 2.49% during 1986. Commercial and industrial consumption increased 3.08% during the year as did residential and rural consumption at 1.78% and 0.42% respectively.

State-wide averages by class of service for revenue/megawatt hour are compared below:

	1986	1985	1984
Residential	\$68.00	\$67.03	\$67.19
Commercial and Industrial	51.60	51.53	52.12
Rural	64.93	63.79	64.48
Public St. and Hwy. Lighting	72.27	70.56	77.31
Other Sales to Public Auth.	50.67	50.56	51.04
Interdepartmental Sales	51.80	52.04	52.33
Total Ultimate Consumers	\$57.06	\$56.72	\$57.23

State-wide average ratios of kilowatt hour consumption per customer and revenue per customer are compared below for the three major classes of service:

	1986	1985	1984
Average Annual Use (kWh)	-----	-----	-----
Residential	7,121	7,071	7,067
Commercial and Industrial	130,524	128,641	128,827
Rural	14,328	14,588	14,112
Average Annual Bill			
Residential	\$ 484.26	\$ 473.92	\$ 474.80
Commercial and Industrial	6,735.50	6,629.38	6,714.72
Rural	930.40	930.62	909.98

Average annual use for residential customers increased by 0.71%, commercial and industrial increased by 1.46% and rural decreased by (1.78)%. Average annual bills for residential customers increased by 2.18%. Commercial and industrial bills also increased by 1.60% while rural bills decreased (0.02)%.

Residential revenue and consumption ratios of Wisconsin utilities are compared with national averages over a 9-year period in Charts 11, 12, and 13. In 1986, the average Wisconsin residential customer consumed 21.4% fewer kilowatt hours and paid an average bill that was 28.3% less than the national average.

Electric Utility Income Account

A summary of the income account of Wisconsin electric utilities for the past three years is presented in Table 4. A 9-year graphic comparison is made in Chart 14

Operating revenues continue to rise steadily with 1986 revenues up 3.13% over 1985. Total operating expenses increased 3.42% and net operating revenues increased by 1.65%.

Table 6 presents a detailed analysis of operating expenses, exclusive of depreciation and taxes. Of the classes of expense shown, customer services had the greatest increase which was 24.43%. Sales was least with (34.47)% decrease.

A comparison of certain expense ratios of private and municipal utilities in 1986 is presented below:

1986 Expense Ratios						
	Per Dollar of Revenue		Per Average Customer		Per MWh Sold	
	Pvt. (Ct)	Mun. (Ct)	Pvt.	Mun.	Pvt.	Mun.
Production and Trans.	43.37	80.15	\$ 575.01	\$ 921.57	\$ 27.67	\$ 41.62
Distribution	5.65	3.47	74.91	39.88	3.61	1.80
Customer Accounts	2.44	1.45	32.40	16.65	1.56	0.75
Customer Services	1.19	0.00	15.72	0.00	0.76	0.00
Sales Promotion 1/	0.04	0.01	0.50	0.09	0.02	0.01
Admin. & General	6.19	4.53	82.06	52.13	3.95	2.35
Total Oper. and Main.	58.88	89.61	780.60	1,030.32	37.57	46.53
Depreciation	10.84	3.99	143.71	45.91	6.92	2.07
Taxes O/T Inc. Taxes	4.32	3.15	57.24	36.22	2.75	1.64
Income Taxes	8.36	0.00	110.78	0.00	5.33	0.00
Total Operating Exp.	82.40	96.75	\$1,092.33	\$1,112.45	\$ 52.57	\$ 50.24

1/ Includes customer service expenses for municipally owned utilities.

CHART 11
ANNUAL KILOWATT HOUR SALES
RESIDENTIAL ELECTRIC CUSTOMERS

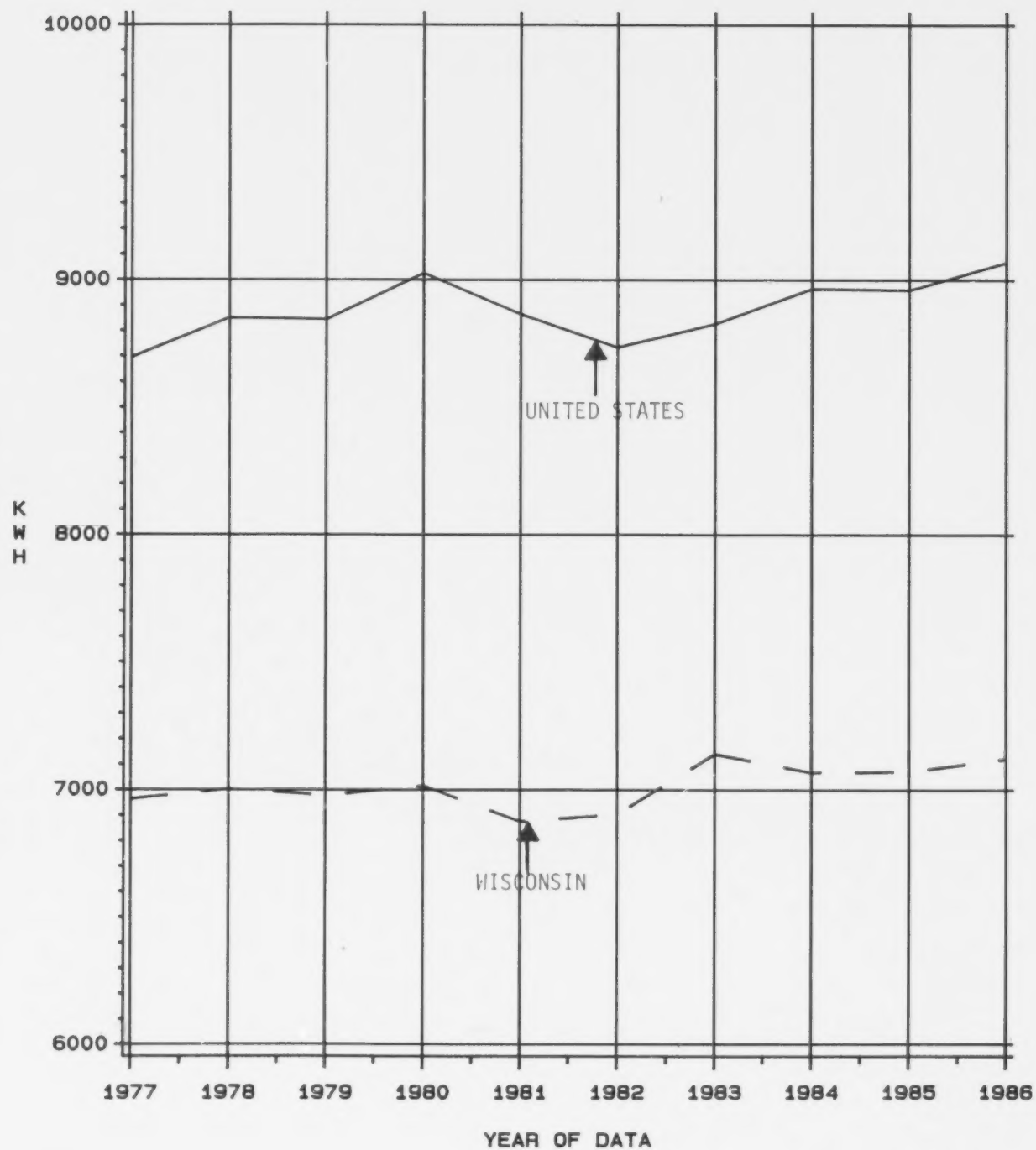


CHART 12
REVENUE PER KILOWATT HOUR
RESIDENTIAL ELECTRIC CUSTOMERS

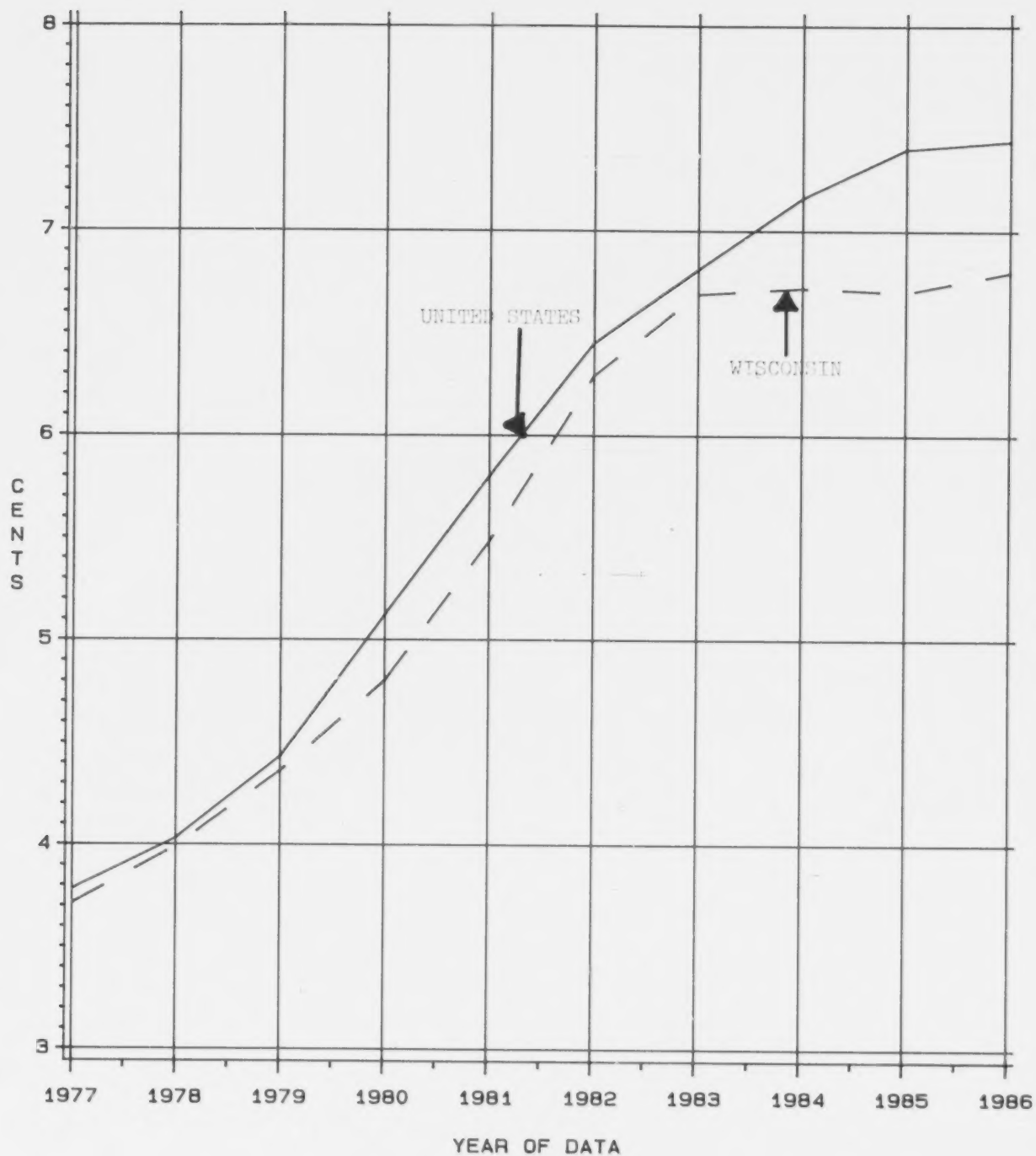


CHART 13
AVERAGE ANNUAL BILL
RESIDENTIAL ELECTRIC CUSTOMERS

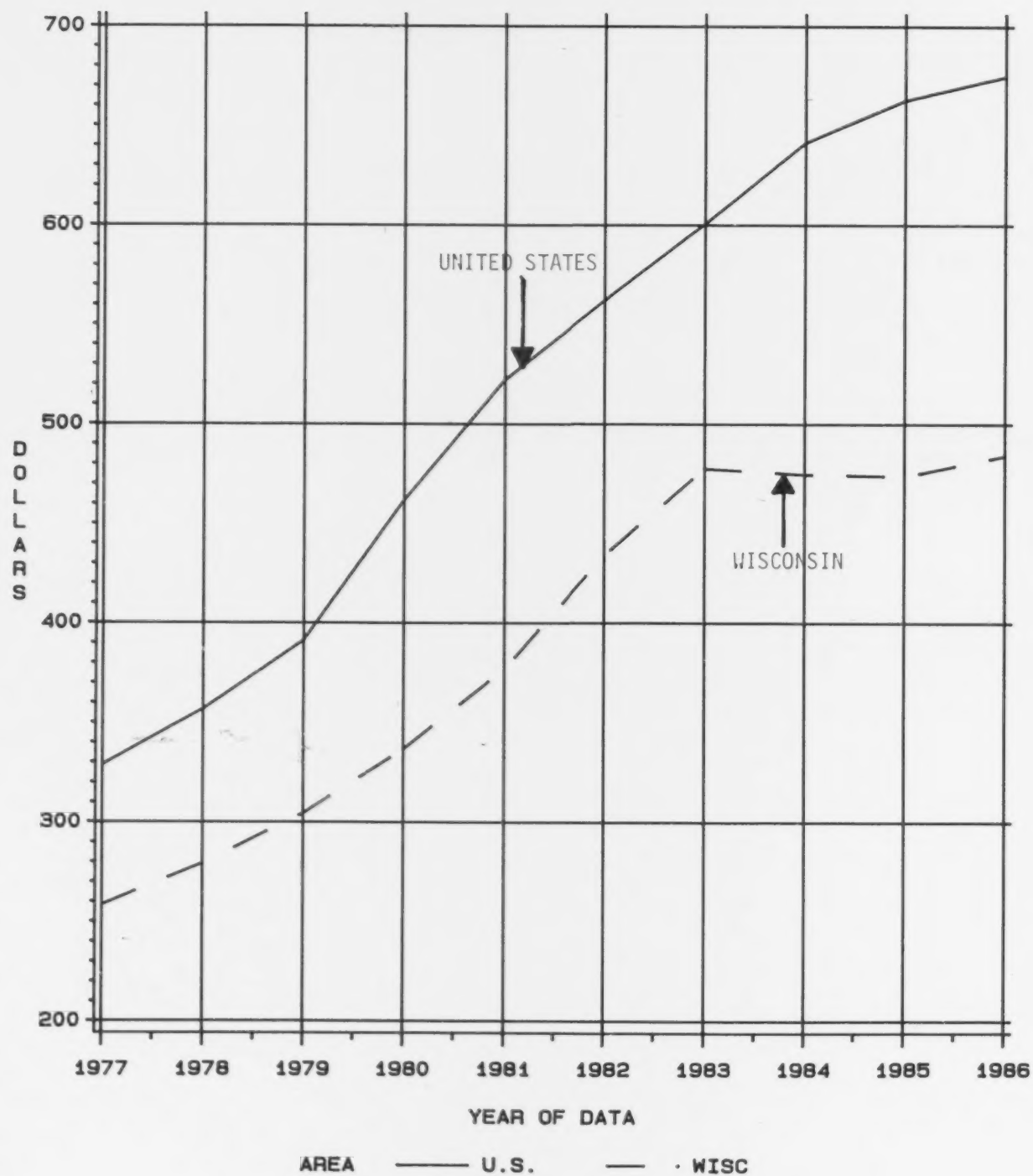
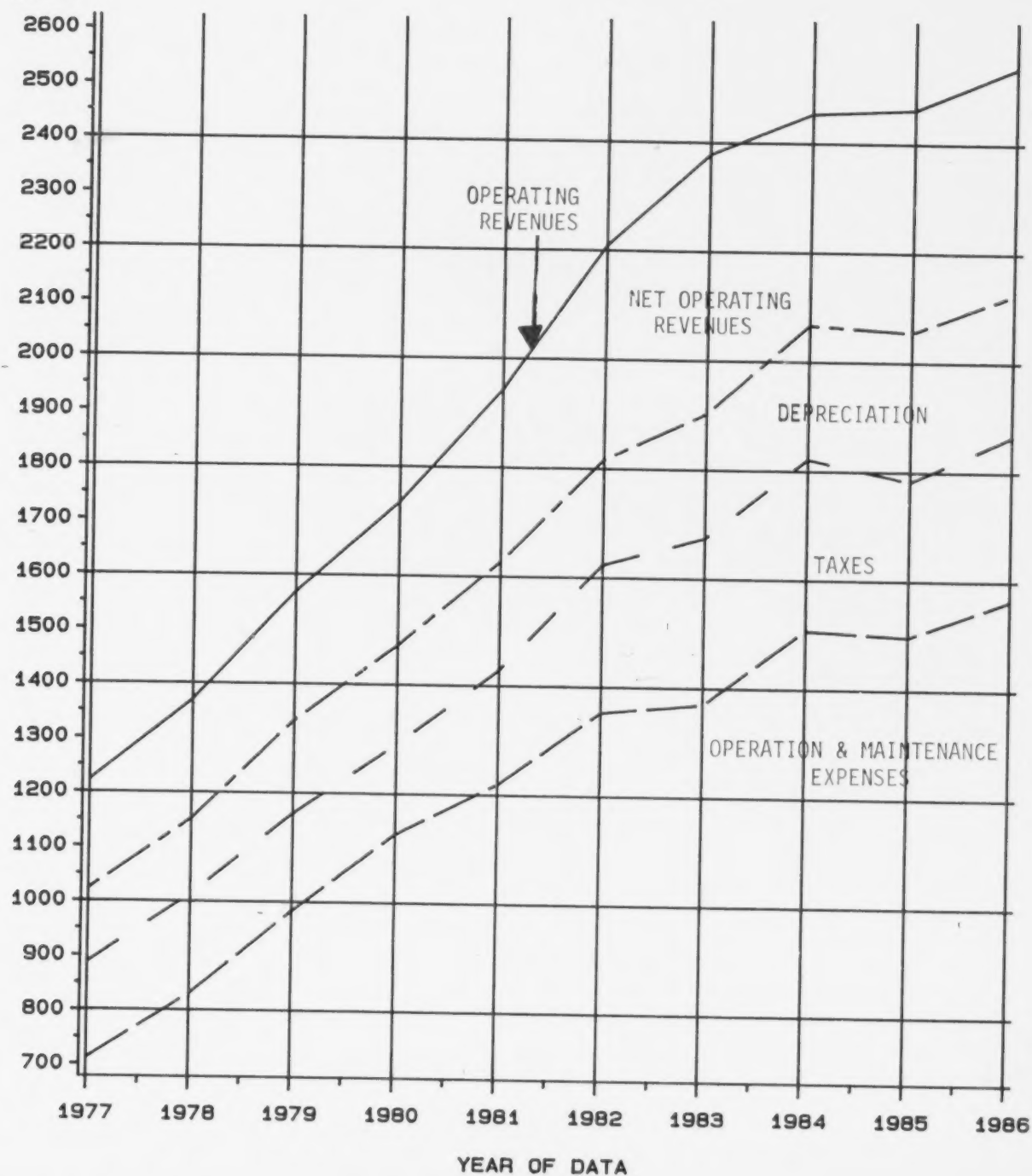


CHART 14

WISCONSIN ELECTRIC UTILITIES REVENUES AND EXPENSES

OMEXP



In addition to the above breakdown of operating expenses, Table 6 presents the detail of production expense on a company-wide basis. If this breakdown is related to corresponding data on generation and purchases, the following comparison of costs per megawatt hour, exclusive of fixed charges, results:

Production Expense* Per Megawatt Hour
Generated or Purchased 1986

	Private Utilities	Municipal Utilities
Steam Plants-Nuclear Fuel	\$ 12.66	\$ 0.00
Steam Plants-Fossil Fuel	24.88	53.34
Hydro Electric Plants	7.26	3.24
Internal Combustion (Recip. & Turbine)	132.07	200.14
Purchased Energy	26.68	39.60

*Excludes depreciation, taxes, and return.

Kilowatt Hours Generated and Purchased; Fuel Consumed

The sources of energy of Wisconsin electric utilities are summarized in Table 8. The net generation by plants located in Wisconsin is compared below on a percentage basis over a period of ten years:

	1986	1985	1984	1983	1982	1981	1980	1979	1978	1977
Steam-Nuclear	28.5%	28.3%	28.2%	25.7%	30.3%	30.1%	28.4%	29.7%	34.3%	33.3%
Steam-Fossil	66.7	66.5	66.9	67.0	63.9	64.5	65.9	62.9	58.1	60.8
Hydro	4.8	5.2	4.8	7.1	5.6	4.8	4.6	5.0	5.1	4.2
Int. Comb.-Recip.	1/	1/	1/	1/	1/	1/	0.1	0.1	0.2	0.1
Int. Comb.-Turbine	1/	1/	0.1	0.2	0.2	0.6	1.0	2.3	2.3	1.6
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

During the ten years covered, fossil steam generating plants have produced a major portion of the State's electric energy, varying from a high of 67.0% in 1983 to a low of 58.1% in 1978. Privately owned utilities generated 99.1% of total energy produced by utilities in 1986. The most significant change has been the nuclear plants which generated no energy in 1970 but now produce about 30% of the total.

Fuel consumption ratios over the past five years are presented below:

	1986	1985	1984	1983	1982
BTU's of Fuel Used in Nuclear Steam Plants Per kWh Generated (Net)	10,579	10,568	10,580	10,816	10,830
BTU's of Fuel Used in Fossil Steam Plants Per kWh Generated (Net)	10,926	10,516	10,939	10,920	11,805
BTU's of Fuel Used in Turbine Plants Per kWh Generated (Net)	17,967	18,185	17,954	16,378	15,264
BTU's of Fuel Used in Reciprocating Plants Per kWh Generated (Net)	NA	9,450	11,268	10,810	10,470

1/ Less than 0.05%.

Generating Plant and Transmission Line Data

Data on the capacity of generating plants and miles of transmission pole line are presented in Table 9. The total capacity of all generating plants operated by Wisconsin utilities as of December 1986 was about 10,000 megawatts of which about 100 megawatts were in plants located outside the State. Of the capacity of plants located in Wisconsin, 14.9% is steam-nuclear, 68.5% is steam-fossil, 3.4% is hydro, 1.1% is by reciprocating engines, and 12.1% is turbine.

About 9,268 miles of transmission line were in service at the close of 1986 of which about 4,412 miles carry voltage in excess of 100,000 volts.

Data on Individual Utilities

Table 10 presents selected operating data covering the year 1986 for each Class A, B, and C private electric utility in the State and Table 11 presents similar data on each Class A, B, and C municipal electric utility. Chart 15 shows the percentage distribution by companies of electric operating revenue from sales to ultimate consumers. Four large private utilities account for 82.6% of the total. Municipal utilities make up 8.8%.

Table 10 shows that private utilities as a group generated a large part of their energy requirements while Table 11 shows that municipal utilities purchase most of their requirements. Of the 79 individual municipal utilities listed, only 17 generated some electricity.

CHART 15

REVENUES OF WISCONSIN ELECTRIC UTILITIES
IN PERCENT OF TOTAL SALES TO ULTIMATE CONSUMERS

1986

SUM OF PERCENT BY UTILITY

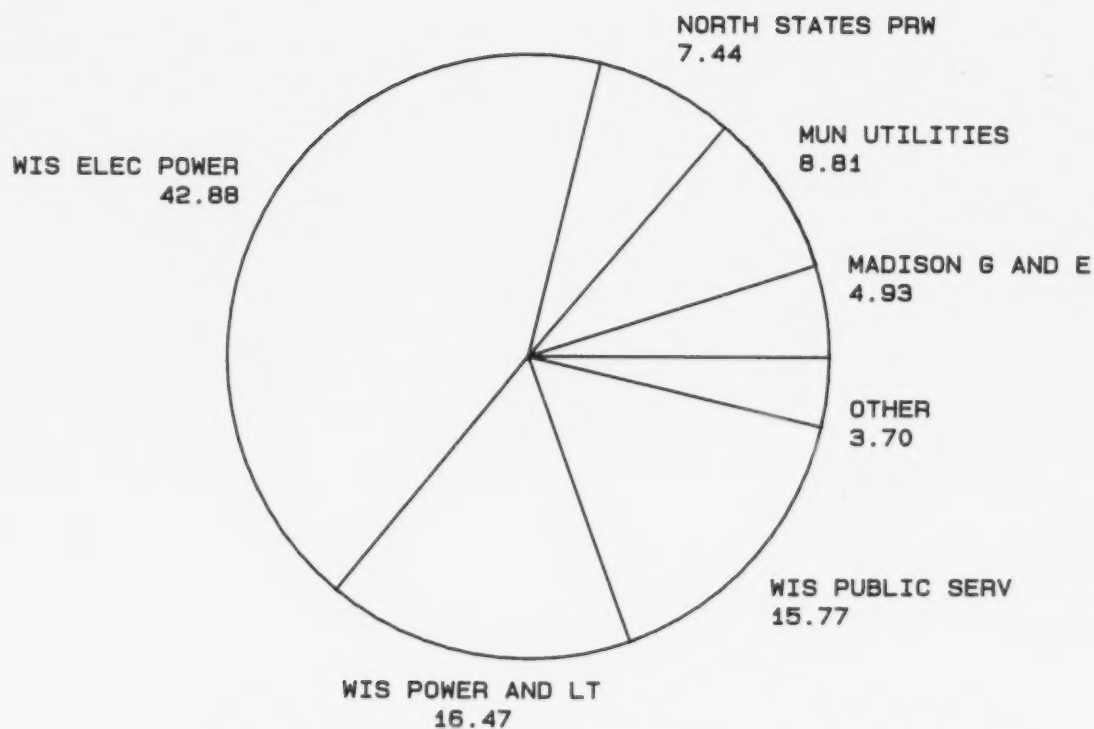


TABLE 4

COMPARATIVE STATEMENT OF REVENUES AND EXPENSES
WISCONSIN ELECTRIC UTILITIES 1/
1986-1984

	1986	1985	1984
All Electric Utilities			
Operating Revenues			
Sales to Ultimate Consumers	\$ 2,317,491,821	\$ 2,247,768,797	\$ 2,226,923,676
Sales to Other Utilities	187,716,164	183,552,864	195,012,726
Sales to Electric Cooperatives	14,054,043	12,870,339	12,691,716
Miscellaneous Revenues	20,800,722	18,844,429	19,553,192
Total Operating Revenues	\$ 2,540,062,750	\$ 2,463,036,429	\$ 2,454,181,310
Operating Revenue Deductions			
Operation and Maintenance	\$ 1,564,401,694	\$ 1,496,886,478	\$ 1,507,357,486
Depreciation and Amortization	260,022,458	272,654,856	245,296,001
Taxes Other than Income Taxes	107,063,303	69,866,428	100,363,764
Income Taxes	193,543,558	215,329,135	213,984,944
Total Operating Expenses	\$ 2,125,031,013	\$ 2,054,736,897	\$ 2,067,002,195
Net Operating Revenues	\$ 415,031,737	\$ 408,299,532	\$ 387,179,115
Private Electric Utilities			
Operating Revenues			
Sales to Ultimate Consumers	\$ 2,097,870,167	\$ 2,038,104,646	\$ 2,022,880,109
Sales to Other Utilities	187,397,280	183,163,448	194,787,508
Sales to Electric Cooperatives	14,054,043	12,870,339	12,381,337
Miscellaneous Revenues	16,890,617	15,192,006	15,986,884
Total Operating Revenues	\$ 2,316,212,107	\$ 2,249,330,439	\$ 2,246,035,838
Operating Revenue Expenses			
Operation and Maintenance	\$ 1,363,815,549	\$ 1,305,606,288	\$ 1,322,111,394
Depreciation and Amortization	251,083,928	264,369,410	237,478,330
Taxes Other than Income Taxes	100,010,838	63,628,979	95,152,604
Income Taxes	193,543,558	215,329,135	213,984,944
Total Operating Expenses	\$ 1,908,453,873	\$ 1,848,933,812	\$ 1,868,727,272
Net Operating Revenues	\$ 407,758,234	\$ 400,396,627	\$ 377,308,566

(Continued)

TABLE 4 (Concluded)

COMPARATIVE STATEMENT OF REVENUES AND EXPENSES
WISCONSIN ELECTRIC UTILITIES 1/
1986-1984

Municipal Electric Utilities	1986	1985	1984
-----	-----	-----	-----
Operating Revenues			
Sales to Ultimate Consumers	\$ 219,621,654	\$ 209,664,151	\$ 204,043,567
Sales to Other Electric Utilities	318,884	389,416	225,218
Sales to Electric Cooperatives	0	0	310,379
Miscellaneous Operating Revenues	3,910,105	3,652,423	3,566,308
-----	-----	-----	-----
Total Operating Revenues	\$ 223,850,643	\$ 213,705,990	\$ 208,145,472
Operating Revenue Expenses			
Operation and Maintenance	\$ 200,586,145	\$ 191,280,190	\$ 185,246,092
Depreciation and Amortization	8,938,530	8,285,446	7,817,671
Taxes Other than Income Taxes	7,052,465	6,237,449	5,211,160
-----	-----	-----	-----
Total Operating Expenses	\$ 216,577,140	\$ 205,803,085	\$ 198,274,923
Net Operating Revenues	\$ 7,273,503	\$ 7,902,905	\$ 9,870,549

1/ Excluding out-of-state operations.

TABLE 5
SALES TO ULTIMATE CONSUMERS BY CLASS
WISCONSIN ELECTRIC UTILITIES 1/
1986-1984

All Electric Utilities	1986	1985	1984
-----	-----	-----	-----
Revenues			
Residential	\$ 768,327,167	\$ 743,994,944	\$ 738,629,643
Commercial and Industrial	1,365,818,511	1,323,184,554	1,316,905,267
Rural	136,256,541	133,300,453	127,794,486
Public Street and Highway Lighting	29,890,493	30,248,012	27,012,683
Other Sales to Public Authorities	12,551,824	12,627,049	12,572,302
Interdepartmental Sales	4,647,284	4,413,785	4,009,294
	-----	-----	-----
Total Revenue from Ultimate Consumers	\$2,317,491,820	\$2,247,768,797	\$2,226,923,675
Megawatt Hours Sold			
Residential	11,298,316	11,100,196	10,993,340
Commercial and Industrial	26,467,579	25,676,013	25,265,824
Rural	2,098,377	2,089,620	1,981,775
Public Street and Highway Lighting	413,574	428,706	349,421
Other Sales to Public Authorities	247,741	249,733	246,319
Interdepartmental Sales	89,717	84,822	76,612
	-----	-----	-----
Total Megawatt Hours Sold to Ultimate Consumers	40,615,304	39,629,090	38,913,291
Average Number of Customers 2/			
Residential	1,586,593	1,569,878	1,555,666
Commercial and Industrial	202,779	199,594	196,122
Rural	146,450	143,239	140,436
Public Street and Highway Lighting	4,940	3,858	4,177
Other Sales to Public Authorities	964	881	983
Interdepartmental Sales	105	109	109
	-----	-----	-----
Total Ultimate Consumers	1,941,831	1,917,559	1,897,493

(Continued)

TABLE 5 (Continued)

SALES TO ULTIMATE CONSUMERS BY CLASS
 WISCONSIN ELECTRIC UTILITIES 1/
 1986-1984

	1986	1985	1984
Private Electric Utilities	-----	-----	-----
Revenues			
Residential	\$ 707,314,266	\$ 684,624,559	\$ 679,751,666
Commercial and Industrial	1,227,763,428	1,192,920,802	1,191,398,035
Rural	123,720,382	121,064,027	115,763,473
Public Street and Highway			
Lighting	26,126,097	26,472,653	23,355,153
Other Sales to Public			
Authorities	11,058,598	11,198,706	10,994,775
Interdepartmental Sales	1,887,395	1,823,899	1,617,007
	-----	-----	-----
Total Revenue from Ultimate Consumers	\$2,097,870,166	\$2,038,104,646	\$2,022,880,109
Megawatt Hours Sold			
Residential	10,148,312	9,963,546	9,861,746
Commercial and Industrial	23,655,154	23,029,158	22,699,727
Rural	1,874,210	1,868,220	1,767,104
Public Street and Highway			
Lighting	364,574	377,054	298,709
Other Sales to Public			
Authorities	226,330	224,753	215,388
Interdepartmental Sales	35,881	34,132	28,385
	-----	-----	-----
Total Megawatt Hours Sold to Ultimate Consumers	36,304,461	35,496,863	34,871,059
Average Number of Customers 2/			
Residential	1,435,692	1,420,592	1,408,034
Commercial and Industrial	177,838	175,209	171,822
Rural	129,312	126,357	123,889
Public Street and Highway			
Lighting	3,682	3,697	3,060
Other Sales to Public			
Authorities	615	615	612
Interdepartmental Sales	8	8	8
	-----	-----	-----
Total Ultimate Consumers	1,747,147	1,726,478	1,707,425

(Continued)

TABLE 5 (Concluded)

SALES TO ULTIMATE CONSUMERS BY CLASS
WISCONSIN ELECTRIC UTILITIES 1/
1986-1984

	1986	1985	1984
Municipal Electric Utilities	-----	-----	-----
Revenues			
Residential	\$ 61,012,901	\$ 59,370,385	\$ 58,877,977
Commercial and Industrial	138,055,083	130,263,752	125,507,232
Rural	12,536,159	12,236,426	12,031,013
Public Street and Highway Lighting	3,764,396	3,775,359	3,657,530
Other Sales to Public Authorities	1,493,226	1,428,343	1,577,527
Interdepartmental Sales	2,759,889	2,589,886	2,392,287
	-----	-----	-----
Total Revenue from Ultimate Consumers	\$219,621,654	\$209,664,151	\$204,043,566
Megawatt Hours Sold			
Residential	1,150,004	1,136,650	1,131,594
Commercial and Industrial	2,812,425	2,646,855	2,566,097
Rural	224,167	221,400	214,671
Public Street and Highway Lighting	49,000	51,652	50,712
Other Sales to Public Authorities	21,411	24,980	30,931
Interdepartmental Sales	53,836	50,690	48,227
	-----	-----	-----
Total Megawatt Hours Sold to Ultimate Consumers	4,310,843	4,132,227	4,042,232
Average Number of Customers 2/			
Residential	150,901	149,286	147,632
Commercial and Industrial	24,941	24,385	24,300
Rural	17,138	16,882	16,547
Public Street and Highway Lighting	1,258	161	166
Other Sales to Public Authorities	349	266	276
Interdepartmental Sales	97	101	101
	-----	-----	-----
Total Ultimate Consumers	194,684	191,081	188,808

1/ Excluding out-of-state operations.

2/ Heating, cooking and yard lighting customers on separate rates are not included in customer data, as they would be duplications.

COMPARATIVE STATEMENT OF OPERATION AND MAINTENANCE EXPENSES
WISCONSIN ELECTRIC UTILITIES 1/
1986-1984

All Electric Utilities	1986	1985	1984
Production Expense-Total Company			
Steam-Nuclear Fuel	\$ 139,737,284	\$ 143,135,663	\$ 149,698,097
Steam-Fossil Fuel	651,786,455	640,082,791	635,789,974
Hydraulic	16,080,458	15,293,389	15,442,538
Int. Comb.-Recip. and Turbine	6,874,329	5,115,954	6,056,944
Purchases or Net Interchanges	357,861,819	360,325,071	371,915,736
Other Power Supply	6,163,572	1,599,173	1,969,399
Total Production Expense	\$1,178,503,917	\$1,165,552,041	\$1,180,872,688
Amount Applicable to Out-of-State Sales	14,261,997	48,687,011	43,601,825
Amount Applicable to Wisconsin Sales	\$1,164,241,920	\$1,116,865,030	\$1,137,270,863
Operation and Maintenance - Wisconsin Only			
Production	\$1,164,241,920	\$1,116,865,030	\$1,137,270,863
Transmission 2/	19,808,541	19,122,712	23,108,828
Distribution 2/	138,644,498	129,100,783	126,059,634
Customer Accounts	59,846,588	56,771,080	50,281,915
Sales Promotion 3/	878,916	1,341,255	1,517,258
Customer Service	27,473,282	22,079,320	22,172,301
Administrative and General	153,507,949	151,606,298	146,946,687
Total	\$1,564,401,694	\$1,496,886,478	\$1,507,357,486
Private Electric Utilities			
Production Expense - Total Company			
Steam-Nuclear Fuel	\$ 139,737,284	\$ 143,135,663	\$ 149,698,097
Steam-Fossil Fuel	638,040,175	626,919,834	623,400,420
Hydraulic	15,685,370	14,828,695	15,069,846
Int. Comb.-Recip. and Turbine	6,216,259	4,417,471	5,339,486
Purchases or Net Interchanges	193,618,563	203,392,129	218,413,080
Other Power Supply	5,966,851	1,598,993	1,969,299
Total Production Expense	\$ 999,264,502	\$ 994,292,785	\$1,013,890,228
Amount Applicable to Out-of-State Sales	14,261,997	48,687,011	43,601,825
Amount Applicable to Wisconsin Sales	\$ 985,002,505	\$ 945,605,774	\$ 970,288,403
Operation and Maintenance - Wisconsin Only			
Production	\$ 985,002,505	\$ 945,605,774	\$ 970,288,403
Transmission 2/	19,632,622	18,991,999	22,989,901
Distribution 2/	130,880,164	121,529,896	119,236,964
Customer Accounts	56,605,114	53,509,291	47,163,563
Sales Promotion	864,473	1,331,409	1,503,236
Customer Service	27,470,182	22,076,257	22,169,307
Administrative and General	143,360,489	142,561,662	138,760,020
Total	\$1,363,815,549	\$1,305,606,288	\$1,322,111,394

TABLE 6 (Concluded)

COMPARATIVE STATEMENT OF OPERATION AND MAINTENANCE EXPENSE
WISCONSIN ELECTRIC UTILITIES 1/
1986-1984

Municipal Electric Utilities	1986	1985	1984
-----	-----	-----	-----
Production Expense			
Steam-Fossil Fuel	\$ 13,746,280	\$ 13,162,957	\$ 12,389,554
Hydraulic	395,088	464,694	372,692
Int. Com.-Recip. and Turbine	658,070	698,483	717,458
Purchases or Net Interchanges	164,243,256	156,932,942	153,502,656
Other Power Supply	196,721	180	100
-----	-----	-----	-----
Total Production Expense	\$ 179,239,415	\$ 171,259,256	\$ 166,982,460
Transmission 2/	175,919	130,713	118,927
Distribution 2/	7,764,334	7,570,887	6,822,670
Customer Accounts	3,241,474	3,261,789	3,118,352
Sales 3/	17,543	12,909	17,016
Administrative and General	10,147,460	9,044,636	8,186,667
-----	-----	-----	-----
Total	\$ 200,586,145	\$ 191,280,190	\$ 185,246,092

1/ Out-of-state operations of Wisconsin Utilities are not included except in detail of production expenses, as indicated.

2/ Transmission and distribution expenses are combined in the Class D report forms. These utilities are assumed to have no transmission expense.

3/ Includes customer service expense for municipal utilities.

TABLE 7
SUMMARY OF MEGAWATT HOURS SOLD AND USED
WISCONSIN ELECTRIC UTILITIES
1986-1984

	1986	1985	1984
All Electric Utilities	-----	-----	-----
MWh Sold to Ultimate Customers (Wisconsin Only)	40,615,304	39,629,090	38,913,291
MWh Sold to Other Electric Utilities	4,893,748	4,759,561	4,914,830
MWh sold at State Line	0	125,953	254,224
MWh sold to Electric Coops.	382,951	358,479	345,673
Total MWh Sold in Wisconsin 1/	45,892,003	44,873,083	44,428,018
MWh Used by Utilities	122,465	138,345	126,769
Total MWh Sold & Used in Wisconsin 1/	46,014,468	45,011,428	44,554,787
MWh Sold Out of State			
Sales to Ultimate Consumers	585,340	581,313	561,018
Sales to Electric Utilities and Cooperatives	1,114,032	1,357,054	1,385,229
Total MWh Sold Out of State	1,699,372	1,938,367	1,946,247
MWh Used by Utilities Out of State	6,630	2,430	3,735
Total MWh Sold & Used Out of State	1,706,002	1,940,797	1,949,982
Total MWh Sold & Used	47,720,470	46,952,225	46,504,769
MWh Unaccounted for	2,964,303	3,060,538	2,993,866
Total MWh Generated and Purchased Purchased 1/	50,684,773	50,012,763	49,498,635

(Continued)

TABLE 7 (Continued)

SUMMARY OF MEGAWATT HOURS SOLD AND USED
WISCONSIN ELECTRIC UTILITIES
1986-1984

	1986	1985	1984
Private Electric Utilities			
MWh Sold to Ultimate Customers (Wisconsin Only)	36,304,461	35,496,863	34,871,059
MWh Sold to Other Electric Utilities	4,892,480	4,756,083	4,908,989
MWh Sold at State Line	0	125,953	254,224
MWh Sold to Electric Cooperatives	382,951	358,479	345,673
Total MWh Sold in Wisconsin 1/	41,579,892	40,737,378	40,379,945
MWh Used by Utilities	106,645	136,452	124,391
Total MWh Sold & Used in Wisconsin 1/	41,686,537	40,873,830	40,504,336
MWh Sold Out of State			
Sales to Ultimate Consumers	585,340	581,313	561,018
Sales to Electric Utilities & Cooperatives	1,114,032	1,357,054	1,385,229
Total MWh Sold Out of State	1,699,372	1,938,367	1,946,247
MWh Used by Utilities Out of State	6,630	2,430	3,735
Total MWh Sold & Used Out of State	1,706,002	1,940,797	1,949,982
Total MWh Sold and Used	43,392,539	42,814,627	42,454,318
MWh Unaccounted for	2,761,517	2,837,791	2,791,316
Total MWh Generated and Purchased 1/	46,154,056	45,652,418	45,245,634

(Continued)

TABLE 7 (Concluded)

SUMMARY OF MEGAWATT HOURS SOLD AND USED
WISCONSIN ELECTRIC UTILITIES
1986-1984

	1986	1985	1984
Municipal Electric Utilities			
MWh Sold to Ultimate Customers (Wisconsin Only)	4,310,843	4,132,227	4,042,232
MWh Sold to Other Electric Utilities	1,268	3,478	5,841
MWh Sold to Electric Coops.	0	0	0
Total MWh Sold in Wisconsin 1/	4,312,111	4,135,705	4,048,073
MWh Used by Utilities	15,820	1,893	2,378
Total MWh Sold or Used in Wisconsin 1/	4,327,931	4,137,598	4,050,451
MWh Sold Out of State			
Sales to Ultimate Consumers	0	0	0
Sales to Electric Utilities & Cooperatives	0	0	0
Total MWh Sold Out of State	0	0	0
MWh Used by Utilities Out of State	0	0	0
Total MWh Sold and Used Out of State	0	0	0
Total MWh Sold and Used	4,327,931	4,137,598	4,050,451
MWh Unaccounted for	202,786	222,747	202,550
Total MWh Generated and Purchased 1/	4,530,717	4,360,345	4,253,001

1/ To avoid double counting subtract "MWh Sold to Other Utilities".

TABLE 8

MEGAWATT HOURS GENERATED AND PURCHASED
WISCONSIN ELECTRIC UTILITIES
1986-1984

	1986	1985	1984
All Electric Utilities	-----	-----	-----
Net Generation in Wisconsin			
Steam - Nuclear Fuel	11,039,856	10,654,941	10,424,529
Steam - Fossil Fuel	25,905,900	25,068,520	24,676,118
Hydraulic	1,847,361	1,949,931	1,785,813
Internal Combustion - Recip.	3,849	4,962	3,325
Internal Combustion - Turbine	46,508	15,212	26,347
Total	38,843,474	37,693,566	36,916,132
Net Generation Outside Wisconsin by Wisconsin Companies			
Hydraulic	436,352	543,610	466,772
Internal Combustion - Recip.	0	0	0
Total	436,352	543,610	466,772
Total Megawatt Hours Generated			
Steam - Nuclear Fuel	11,039,856	10,654,941	10,424,529
Steam - Fossil Fuel	25,905,900	25,068,520	24,676,118
Hydraulic	2,283,713	2,493,541	2,252,585
Internal Combustion - Recip.	3,849	4,962	3,325
Internal Combustion - Turbine	46,508	15,212	26,347
Total	39,279,826	38,237,176	37,382,904
Megawatt Hours Purchased Plus Net Interchanges			
From Wisconsin Electric Utils. 2/	8,845,408	9,389,128	9,234,694
From Out-of-State Elec. Utils. 3/	0	(2,127,439)	1,011,328
From Electric Cooperatives	1,634,381	1,502,262	1,611,536
From Other Non-Utility Companies	925,158	3,011,636	258,173
Total	11,404,947	11,775,587	12,115,731
Total Megawatt Hours Generated and Purchased 2/	50,684,773	50,012,763	49,498,635
Tons of Coal Used in Steam Plants	12,234,977	13,797,648	13,333,981
Gallons of Fuel Oil Used in Steam Plants	5,585,748	7,912,464	6,007,386
Therms of Natural Gas Used in Steam Plants	10,645,370	11,373,778	14,244,740
Tons of Wood in Steam Plants	186,552	153,353	130,617
Gallons of Fuel Oil Used in Internal Combustion-Recip. Plants	184,101	207,356	54,890
Therms of Natural Gas Used in Internal Combustion-Recip. Plants	444,400	277,248	23,600
Gallons of Fuel Oil Used in Internal Combustion-Turbine Plts.	4,076,772	979,440	819,294
Therms of Natural Gas Used in Internal Combustion-Turbine Plts.	2,577,164	2,434,179	4,457,177

MEGAWATT HOURS GENERATED AND PURCHASED
WISCONSIN ELECTRIC UTILITIES
1986-1984

	1986	1985	1984
Private Electric Utilities 1/	-----	-----	-----
Net Generation in Wisconsin			
Steam - Nuclear Fuel	11,039,856	10,654,941	10,424,529
Steam - Fossil Fuel	25,648,191	24,829,399	24,439,199
Hydraulic	1,725,266	1,832,597	1,657,149
Internal Combustion - Recip.	747	564	181
Internal Combustion - Turbine	46,322	15,057	25,836
Total	38,460,382	37,332,558	36,546,894
Net Generation Outside Wisconsin by Wisconsin Companies			
Hydraulic	436,352	543,610	466,772
Internal Combustion - Recip.	0	0	0
Total	436,352	543,610	466,772
Total Megawatt Hours Generated			
Steam - Nuclear Fuel	11,039,856	10,654,941	10,424,529
Steam - Fossil Fuel	25,648,191	24,829,399	24,439,199
Hydraulic	2,161,618	2,376,207	2,123,921
Internal Combustion - Recip.	747	564	181
Internal Combustion - Turbine	46,322	15,057	25,836
Total	38,896,734	37,876,168	37,013,666
Megawatt Hours Purchased Plus Net Interchanges			
From Wisconsin Electric Utilities 2/	4,822,356	5,515,582	5,473,259
From Out-of-State Elec. Utils. 3/	0	(2,127,439)	1,011,328
From Electric Cooperatives	1,510,389	1,379,046	1,492,149
From Other Non-Utility Companies	924,577	3,009,061	255,232
Total	7,257,322	7,776,250	8,231,968
Total Megawatt Hours Generated and Purchased 2/	46,154,056	45,652,418	45,245,634
Tons of Coal Used in Steam Plants	12,047,798	13,641,631	13,158,458
Gallons of Fuel Oil Used in Steam Plants	5,585,748	7,912,464	6,007,386
Therms of Natural Gas Used in Steam Plants	10,645,370	11,373,778	14,244,740
Tons of Wood in Steam Plants	186,552	153,353	130,617
Gallons of Fuel Oil Used in Internal Combustion-Recip. Plants	63,462	49,258	20,596
Therms of Natural Gas Used in Internal Combustion-Recip. Plants	442,490	0	0
Gallons of Fuel Oil Used in Internal Combustion-Turbine Plts.	4,076,772	979,440	819,294
Therms of Natural Gas Used in Internal Combustion-Turbine Plts.	2,573,626	2,399,079	4,457,177

TABLE 8 (Concluded)

MEGAWATT HOURS GENERATED AND PURCHASED
WISCONSIN ELECTRIC UTILITIES
1986-1984

	1986	1985	1984
Municipal Electric Utilities	-----	-----	-----
Net Generation in Wisconsin			
Steam - Fossil Fuel	257,709	239,121	236,919
Hydraulic	122,095	117,334	128,664
Internal Combustion - Recip.	3,102	4,398	3,144
Internal Combustion - Turbine	186	155	511
Total	383,092	361,008	369,238
Megawatt Hours Purchased plus Net Interchanges			
From Wisconsin Electric Utils. 2/	4,023,052	3,873,546	3,761,435
From Electric Cooperatives	123,992	123,216	119,387
From Other Non-Utility Companies	581	2,575	2,941
Total	4,147,625	3,999,337	3,883,763
Total Megawatt Hours Generated and Purchased 2/	4,530,717	4,360,345	4,253,001
Tons of Coal Used in Steam Plants	234,427	156,017	175,523
Gallons of Fuel Oil Used in Steam Plants	0	0	0
Therms of Natural Gas Used in Steam Plants	0	0	0
Gallons of Fuel Oil Used in Internal Combustion-Recip. Plants	120,639	158,098	34,294
Therms of Natural Gas Used in Internal Combustion-Recip. Plants	1,910	277,248	23,600
Gallons of Fuel Oil Used in Internal Combustion-Turbine Plants	0	0	0
Therms of Natural Gas Used in Internal Combustion-Turbine Plants	3,538	35,100	0

- 1/ Experimental generation using windmills and photo voltaics is being done by some utilities. These plants will be included in the Bulletin if and when they produce a significant amount of commercial power.
- 2/ Energy included in "Purchased from Wisconsin Electric Utilities" is also included in the generation figures. Therefore, to avoid double counting, you should subtract "Purchased from Wisconsin Electric Utilities" from the "Total Megawatt Hours Generated and Purchased" figure.
- 3/ Includes purchases delivered in Wisconsin or at state line.

GENERATING PLANT AND TRANSMISSION LINE DATA
WISCONSIN ELECTRIC UTILITIES
1986-1984

Capacity of Generators in Kilowatts	1986	1985	1984
All Plants in Wisconsin			
Steam - Nuclear Fuel	1,540,682	1,540,682	1,540,682
Steam - Fossil Fuel	7,052,828	7,152,528	6,235,268
Hydraulic	354,342	355,030	355,020
Internal Combustion - Recip.	108,627	111,000	103,050
Internal Combustion - Turbine	1,251,950	1,285,950	1,285,950
Total	10,308,429	10,445,190	9,520,345
Private Utility Plants in Wisconsin			
Steam - Nuclear Fuel	1,540,682	1,540,682	1,540,682
Steam - Fossil Fuel	6,907,648	7,003,848	6,083,838
Hydraulic	335,710	336,145	336,145
Internal Combustion-Recip.	24,640	27,331	27,231
Internal Combustion-Turbine	1,231,950	1,265,950	1,265,950
Total	10,040,630	10,173,956	9,253,846
Municipal Utility Plants in Wisconsin			
Steam - Fossil Fuel	145,180	148,680	151,430
Hydraulic	18,632	18,885	18,875
Internal Combustion-Recip.	83,987	83,669	73,169
Internal Combustion-Turbine	20,000	20,000	20,000
Total	267,799	271,234	263,474
Plants Located Outside Wisconsin Operated by Wisconsin Utils. 1/ Hydraulic	99,990	99,990	99,990
Total	99,990	99,990	99,990
Total Plants Operated by Wisconsin Utilities			
Steam - Nuclear Fuel	1,540,682	1,540,682	1,540,682
Steam - Fossil Fuel	7,052,828	7,152,528	6,235,268
Hydraulic	454,332	455,020	455,010
Internal Combustion-Recip.	108,627	116,042	100,400
Internal Combustion-Turbine	1,251,950	1,285,950	1,285,950
Total	10,408,419	10,550,222	9,617,310
Miles of Transmission Pole or Tower (Including Out-of-State)			
Over 100,000 Volts	4,412	4,393	4,399
Less than 100,000 Volts	4,856	4,838	4,820

1/ Out-of-State plants are all owned by private electric utilities.

TABLE 10
CONDENSED SUMMARY OF 1986 OPERATIONS
INDIVIDUAL PRIVATE ELECTRIC UTILITIES 1/

Utilities	Operating Revenues 2/	Operation and Maintenance	Depreciation and Amortization	Taxes Other Than Income Taxes	Income Taxes	Net Operating Revenue	Total MWh Sold 2/	Average Number of Consumers 3/	MWh Generated 4/	MWh Purchased 4/
Class A, B, and C										
Consolidated Water Power Co.	\$ 20,880,510	\$ 22,595,750	\$ 510,774	\$ 163,130	\$ (1,210,255)	\$(1,178,889)	619,345	991	141,451	490,365
Dahlberg Light & Power Co.	4,479,415	3,495,026	349,819	123,632	117,407	393,531	55,123	7,985	3,651	58,490
Lake Superior District Power Co.	33,120,807	21,269,489	3,169,861	1,510,354	2,952,594	4,218,509	591,109	32,091	247,527	535,190
Madison Gas and Electric Co.	125,054,329	68,596,531	15,653,562	5,446,915	11,550,523	23,806,798	2,028,106	103,825	1,877,664	256,205
North Central Power Co.	1,349,990	965,034	106,701	61,486	28,761	188,008	20,796	3,084	12,770	10,719
Northern States Power Co.	189,023,593	126,897,628	18,029,871	7,200,218	14,987,936	21,907,940	3,779,263	146,915	946,633	3,197,824
Northwestern Wisconsin Electric Co.	6,366,777	4,797,252	638,268	188,422	69,458	673,377	101,617	9,143	14,977	98,657
Pioneer Power & Light Co.	1,061,920	889,095	52,159	22,698	10,721	87,247	17,079	1,377	0	18,090
Superior Water, Light & Power Co.	26,290,114	22,087,960	736,592	996,189	821,204	1,648,169	496,867	12,181	0	510,541
Westfield Milling & Electric Light Co.	479,258	405,938	17,985	7,546	8,494	39,295	7,197	571	0	7,667
Wisconsin Electric Power Co.	1,089,279,731	603,824,248	119,852,348	48,192,214	103,891,558	213,519,363	18,365,973	819,380	19,136,408	1,044,395
Wisconsin Power and Light Co.	418,392,477	249,602,754	52,058,668	19,449,446	31,401,279	65,880,330	7,911,990	313,428	8,668,189	571,571
Wisconsin Public Service Corp.	400,433,186	238,388,844	39,907,320	16,648,588	28,913,878	76,574,556	7,585,427	296,271	7,847,464	457,608
Grand Total	\$2,316,212,107	\$1,363,815,549	\$251,083,928	\$100,010,838	\$193,543,558	\$407,758,234	41,579,892	1,747,242	38,896,734	7,257,322

1/ Data included in this table includes Wisconsin operations only, except where noted.

2/ Includes Interdepartmental Sales and Sales for Resale.

3/ Excluding Off-Peak Water Heating and Area Lighting Customers.

4/ Total company operations are represented in data on generation and purchases. Companies operating outside Wisconsin are: Lake Superior District Power Co., Northwestern Wisconsin Electric Co., Wisconsin Electric Power Co., and Wisconsin Public Service Corp. Where power is interchanged, the net figure is added to MWh purchased.

TABLE 11

CONDENSED SUMMARY OF 1986 OPERATIONS
INDIVIDUAL MUNICIPAL ELECTRIC UTILITIES 1/

Utilities	Operating Revenues	Operation and Maintenance	Depreciation and Amortization	Taxes Other Than Income Taxes	Net Operating Revenue	Total MWh Sold 2/	Average Number of Customers 3/	MWh Generated 4/	MWh Purchased 4/
Class A, B, and C									
Algoma	\$ 1,810,128	\$ 1,684,378	\$ 38,891	\$ 36,055	\$ 50,804	32,132	1,815	0	33,126
Arcadia	1,411,621	1,208,893	132,602	80,148	(10,022)	31,387	1,129	372	32,134
Bangor	1,505,516	1,316,847	58,197	59,037	71,435	27,945	1,334	0	30,638
Barron	1,496,145	1,272,311	102,148	60,846	60,840	29,132	1,501	397	30,479
Belmont	282,334	258,972	14,557	7,472	1,333	5,237	416	0	5,575
Benton	289,795	235,350	8,461	6,859	39,125	4,352	422	0	4,717
Black Earth	651,916	522,704	28,707	24,979	75,526	10,194	908	0	10,742
Black River Falls	1,832,655	1,594,927	81,648	71,361	84,719	38,581	2,325	5,489	35,245
Bloomer	1,759,100	1,590,539	38,086	29,662	100,813	37,379	1,580	0	38,909
Boscobel	1,417,974	1,212,114	81,764	58,792	65,304	24,762	1,578	0	26,284
Brodhead	1,332,289	1,192,894	56,901	37,653	44,841	25,016	1,594	0	27,122
Cadott	525,746	449,324	23,622	11,628	41,172	9,369	641	0	9,976
Cashton	268,102	225,185	21,205	14,891	6,821	5,397	446	(19)	5,602
Cedarburg	5,107,430	4,517,757	174,549	140,395	274,729	86,810	4,641	0	90,882
Centuria	239,465	231,965	6,549	4,321	(3,370)	4,189	383	0	4,613
Clintonville	2,673,324	2,479,507	88,391	72,559	32,867	44,033	2,236	0	46,816
Columbus	2,006,202	1,854,390	88,502	63,267	43	38,968	2,089	0	41,602
Cornell	622,663	542,760	25,056	21,580	33,267	11,437	797	0	12,035
Cuba City	638,591	584,592	38,259	16,194	(454)	12,088	889	0	12,921
Cumberland	1,591,988	1,168,291	179,763	121,111	122,823	24,054	1,162	237	25,500
Eagle River	1,222,036	1,095,089	38,786	31,446	56,715	20,365	1,064	0	21,341
Elkhorn	3,225,963	2,840,029	145,761	97,880	142,293	53,755	2,569	0	56,262
Elroy	652,737	617,637	49,604	27,829	(42,333)	13,721	785	(119)	14,735
Evanville	2,006,299	1,823,987	59,182	52,378	70,752	37,180	2,209	0	39,974
Fennimore	1,073,753	1,023,018	56,471	30,870	(36,606)	21,220	1,159	83	21,786
Florence	472,229	409,277	29,493	14,916	18,543	7,534	791	0	8,206
Gresham	472,034	344,839	47,246	35,684	44,265	8,875	899	4,656	5,078
Hartford	3,663,013	3,352,394	81,066	89,004	140,549	62,056	3,101	0	65,719
Hazel Green	349,079	331,753	14,451	8,245	(5,370)	6,013	517	0	6,587
Hustisford	785,198	671,069	53,327	33,719	27,083	13,185	1,029	0	14,207

TABLE 11 (Continued)

CONDENSED SUMMARY OF 1985 OPERATIONS
INDIVIDUAL MUNICIPAL ELECTRIC UTILITIES 1/

Utilities	Operating Revenues	Operation and Maintenance	Depreciation and Amortization	Taxes Other Than Income Taxes	Net Operating Revenue	Total MWh Sold 2/	Average Number of Customers 3/	MWh Generated 4/	MWh Purchased 4/
Jefferson	\$ 5,367,617	\$ 5,064,178	\$ 87,446	\$ 86,540	\$ 129,453	98,371	3,249	0	109,469
Juneau	1,181,913	1,000,737	58,501	41,704	80,971	22,301	828	0	22,626
Kaukauna	20,010,088	17,593,780	668,696	643,260	1,104,382	522,662	9,163	108,827	435,271
Kiel	2,184,953	2,050,190	67,181	45,423	22,159	40,924	1,634	0	41,674
LaFarge	293,908	270,419	14,060	12,010	(2,581)	4,501	491	0	4,874
Lake Mills	2,542,635	2,277,386	68,398	61,387	135,464	44,022	2,411	0	46,879
Lodi	7,795,890	7,116,963	39,868	27,780	11,279	14,191	1,023	0	14,922
Manitowoc	19,887,782	18,021,980	953,869	781,732	130,201	369,199	14,622	122,628	259,149
Marshfield	13,267,937	11,729,207	495,860	430,345	612,525	243,573	10,048	71,544	181,857
Mazonianie	413,603	368,115	20,542	14,109	10,837	6,958	645	0	7,697
Medford	3,234,576	2,964,104	96,564	74,274	99,634	72,205	2,580	0	74,893
Menasha	7,357,445	6,361,883	439,861	394,753	160,948	124,786	6,454	42,858	86,133
Mount Horeb	1,687,516	1,496,250	97,375	61,436	32,455	31,811	1,946	0	32,998
Muscoda	851,164	728,789	44,208	29,500	48,667	14,015	872	220	15,441
New Glarus	732,024	681,920	26,059	16,191	7,854	14,463	918	0	15,307
New Holstein	2,803,868	2,652,319	91,609	59,213	727	48,738	2,006	0	51,000
New Lisbon	627,261	499,589	72,196	42,278	13,198	12,298	718	107	12,642
New London	6,208,756	5,970,965	125,286	149,231	(36,726)	126,871	3,081	0	130,415
New Richmond	2,027,435	1,840,204	65,936	50,435	70,860	42,071	2,330	0	44,734
Oconomowoc	6,592,133	5,788,455	269,917	199,768	333,993	117,678	5,561	0	120,821
Oconto Falls	1,136,552	1,039,166	33,453	26,651	37,282	19,022	1,291	0	20,353
Pardeeville	695,297	667,705	29,358	17,662	(19,428)	13,840	945	259	14,548
Plymouth	6,049,642	5,355,478	265,729	185,877	242,558	116,331	5,413	0	125,784
Prairie Du Sac	992,244	879,870	37,793	22,685	51,886	16,697	1,052	0	17,837
Princeton	596,357	523,505	29,179	17,064	26,609	9,894	801	0	10,280
Reedsburg	4,351,439	4,001,850	102,525	75,948	171,116	90,326	2,708	0	96,373
Rice Lake	4,742,861	4,257,170	195,822	149,929	139,940	96,073	4,567	22,736	104,976
Richland Center	3,901,891	3,602,321	190,414	155,597	(46,441)	65,856	2,730	0	46,628
River Falls	3,705,715	3,153,795	243,120	166,663	142,137	70,453	4,140	2,697	70,537
Sauk City	1,243,921	1,146,204	46,568	27,722	23,427	22,554	1,369	0	25,439

TABLE 11 (Concluded)

CONDENSED SUMMARY OF 1984 OPERATIONS
INDIVIDUAL MUNICIPAL ELECTRIC UTILITIES 1/

Utilities	Operating Revenues	Operation and Maintenance	Depreciation and Amortization	Taxes Other Than Income Taxes	Net Operating Revenue	Total MWh Sold 2/	Average Number of Customers 3/	MWh Generated 4/	MWh Purchased 4/
Shawano	\$ 7,019,128	\$ 6,438,149	\$ 194,178	\$ 202,543	\$ 184,258	137,322	4,342	0	140,956
Sheboygan Falls	5,283,913	4,932,990	162,154	80,450	108,319	121,086	2,749	0	126,492
Shullsburg	472,035	414,610	22,823	15,768	18,834	8,367	701	0	8,998
Slinger	781,893	698,201	26,825	15,418	41,449	12,977	798	0	13,851
Spooner	1,143,924	1,080,891	29,156	25,212	8,665	22,229	1,420	0	24,309
Stoughton	4,186,980	3,838,481	158,549	110,969	78,981	78,420	5,489	0	82,158
Stratford	508,654	477,027	14,289	7,255	10,083	8,214	673	0	8,967
Sturgeon Bay	7,083,604	6,007,424	312,032	238,965	525,183	119,008	6,426	0	123,822
Sun Prairie	4,706,223	4,121,599	189,654	140,508	254,462	94,712	5,521	0	99,246
Trempealeau	406,241	349,513	14,998	13,706	28,024	7,613	710	0	8,651
Two Rivers	3,983,893	3,637,719	140,159	108,870	47,145	70,205	5,675	0	74,634
Waterloo	2,175,436	1,971,723	47,329	42,869	113,515	40,137	1,330	0	41,825
Waunakee	1,905,244	1,670,114	87,771	50,368	96,991	34,705	2,025	0	36,914
Waupun	2,858,297	2,633,192	92,234	65,360	67,511	59,092	3,280	0	61,499
Westby	758,685	671,153	30,671	19,955	36,906	15,126	904	0	16,155
Whitehall	864,941	768,551	41,025	32,517	22,848	17,541	837	0	18,202
Wisconsin Dells	1,622,037	1,528,446	72,464	47,785	(26,658)	30,660	1,621	0	33,622
Wisconsin Rapids	10,084,228	8,927,889	386,697	361,007	408,635	173,463	10,655	0	183,714
Wonegoc	282,717	269,200	9,233	3,779	505	5,591	447	0	6,029
Subtotal	\$ 222,997,821	\$ 199,844,141	\$ 8,872,879	\$ 7,011,242	\$ 7,269,559	4,295,538	193,208	382,872	4,130,404
Class D									
4 Utilities	852,822	742,004	65,651	41,223	3,944	16,573	1,485	220	17,221
Grand Total	\$ 223,850,643	\$ 200,586,145	\$ 8,938,530	\$ 7,052,465	\$ 7,273,503	4,312,111	194,693	383,092	4,147,625

1/ Data included in this table includes Wisconsin operations only, except where noted.

2/ Includes Interdepartmental Sales and Sales for Resale.

3/ Excluding Off-Peak Water Heating and Area Lighting Customers.

4/ Total company operations are represented in data on generation and purchases. Companies operating outside Wisconsin are: Lake Superior District Power Co., Northwestern Wisconsin Electric Co., Wisconsin Electric Power Co., and Wisconsin Public Service Corporation. Where power is interchanged, the net figure is added to MWh purchased.

GAS UTILITY SUMMARY -----

Comparative statistics of the gas utility industry in Wisconsin for the three year period 1986-1984 are presented in this section. The following tables and charts deal with gas utility operations:

- Table 12 - Comparative Statement of Revenues and Expenses, 1986 -1984.
- Table 13 - Sales to Ultimate Consumers by Classes, 1986 -1984.
- Table 14 - Operating and Plant Statistics, 1986 -1984.
- Table 15 - Condensed Summary of 1986 Operations - Individual Utilities

- Chart 16 - Comparison of Revenues and Expenses, Wisconsin Gas Utilities, 1977 -1986.
- Chart 17 - Residential Gas Spaceheating Customers
Average Annual Use - 1977-1986.
- Chart 18 - Residential Gas Spaceheating Customers
Revenue per Therm - 1977-1986.
- Chart 19 - Residential Gas Spaceheating Customers
Average Annual Bill - 1977-1986.
- Chart 20 - Revenue of Individual Gas Utilities, Percent of Total
Sales to Ultimate Consumers, 1986.

Gas Utility Revenues and Expenses -----

Table 12 and Chart 16 show that gas utility revenues in 1986 were down about (18.00)% from the previous year. Expenses were down (17.83)% during the same period. Therms sold to ultimate consumers decreased (15.61)% and the number of ultimate (retail) consumers increased 1.97%.

Sales to Ultimate Consumers -----

Table 13 summarizes sales to ultimate consumers. Percentage changes in 1986 by principle classes of service are given below:

	% Change From 1985 to 1986		
	Revenues	Therms Sold	Number of Customers
Residential - General	(15.32)%	(13.26)%	(5.48)%
Residential - Space Heating	(8.52)	(4.88)	2.68
Commercial and Industrial - Firm	(21.11)	(14.46)	(2.97)
Commercial and Industrial - Interr.	(43.23)	(37.60)	(29.99)
Commercial and Industrial - Sp. Htg.	(12.22)	(7.54)	3.38
Total Sales to Ultimate Consumers	(18.02)%	(15.61)%	1.97 %

The number of residential space heating customers rose 2.68% during 1986. Since many of these customers formerly took service as residential general customers, a decline occurred in the number served in that classification. Commercial and industrial firm and interruptible customers decreased by (7.91)% while commercial and industrial space heating customers increased by 3.38%.

CHART 16

WISCONSIN GAS UTILITIES REVENUES AND EXPENSES

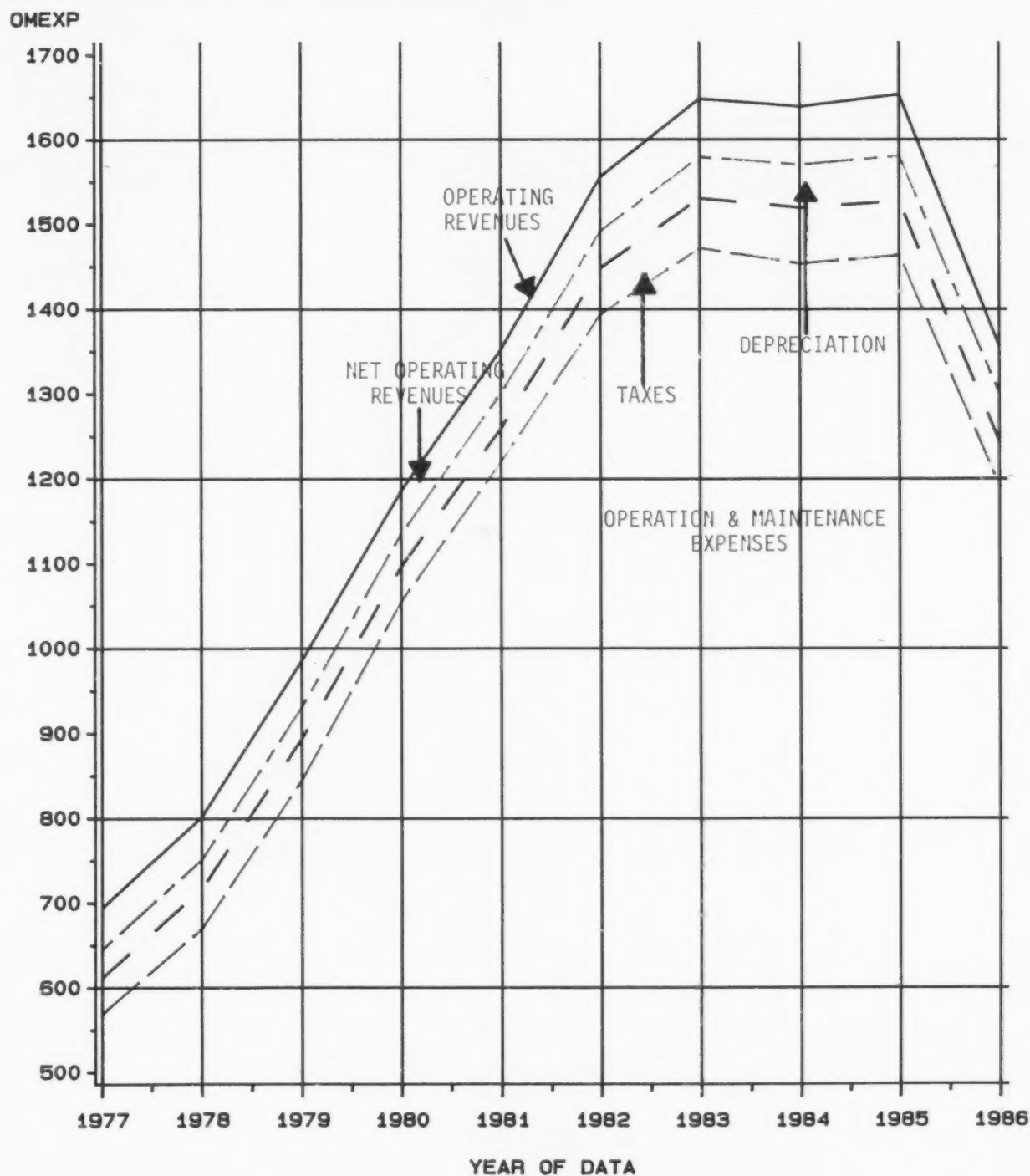


CHART 17
AVERAGE ANNUAL USE
RESIDENTIAL GAS SPACEHEATING CUSTOMERS

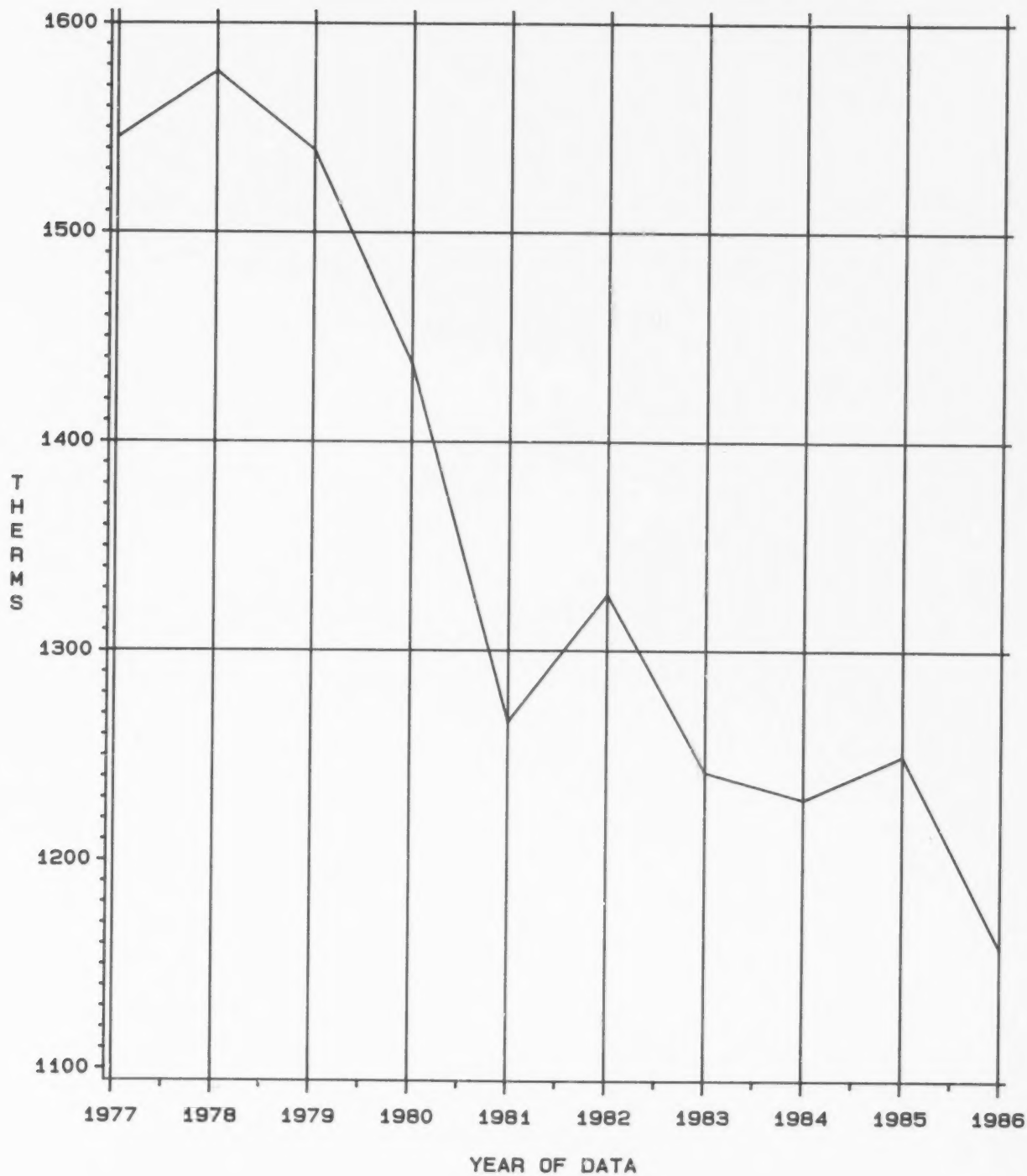


CHART 18
REVENUE PER THERM
RESIDENTIAL GAS SPACEHEATING CUSTOMERS

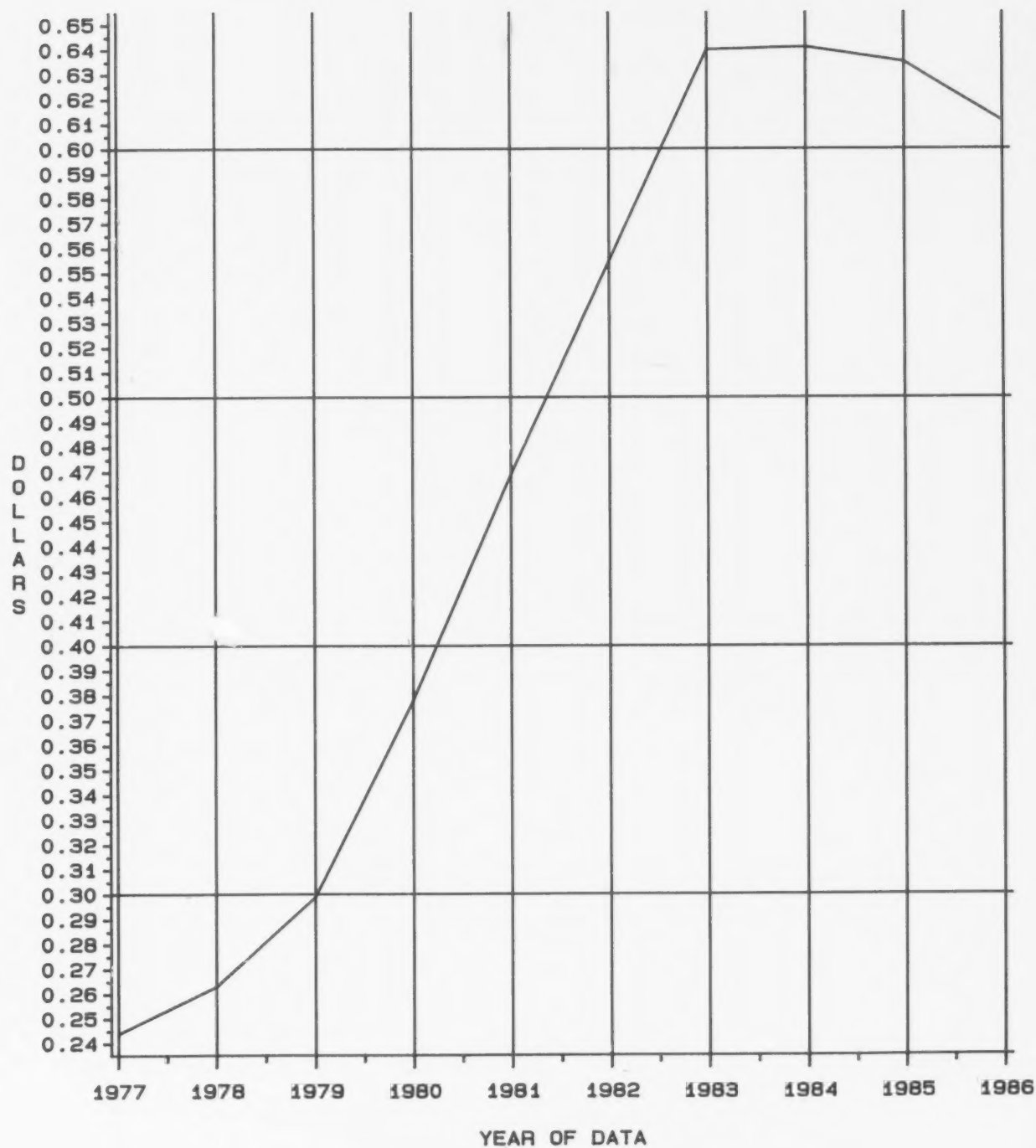


CHART 19
AVERAGE ANNUAL BILL
RESIDENTIAL GAS SPACEHEATING CUSTOMERS

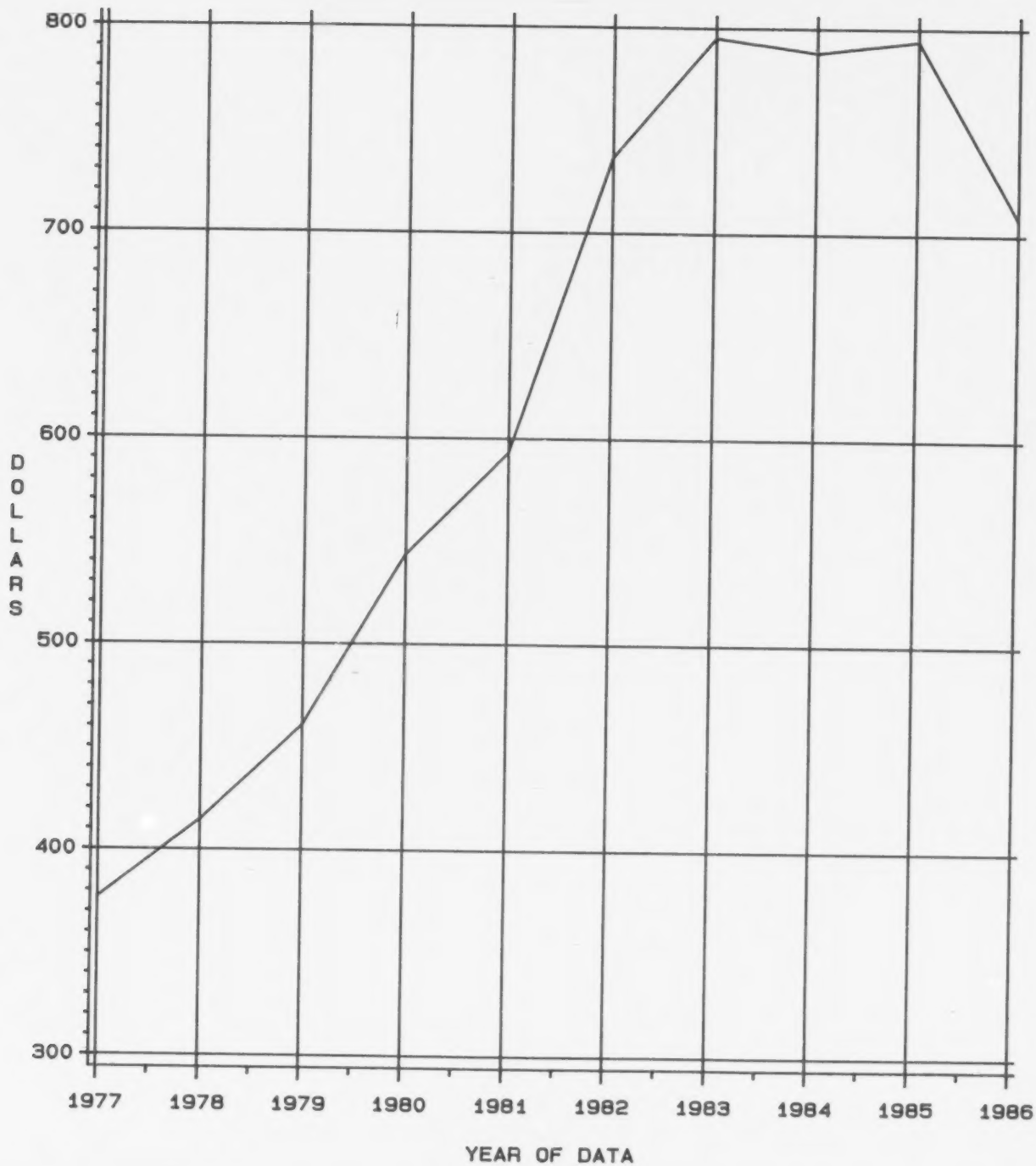
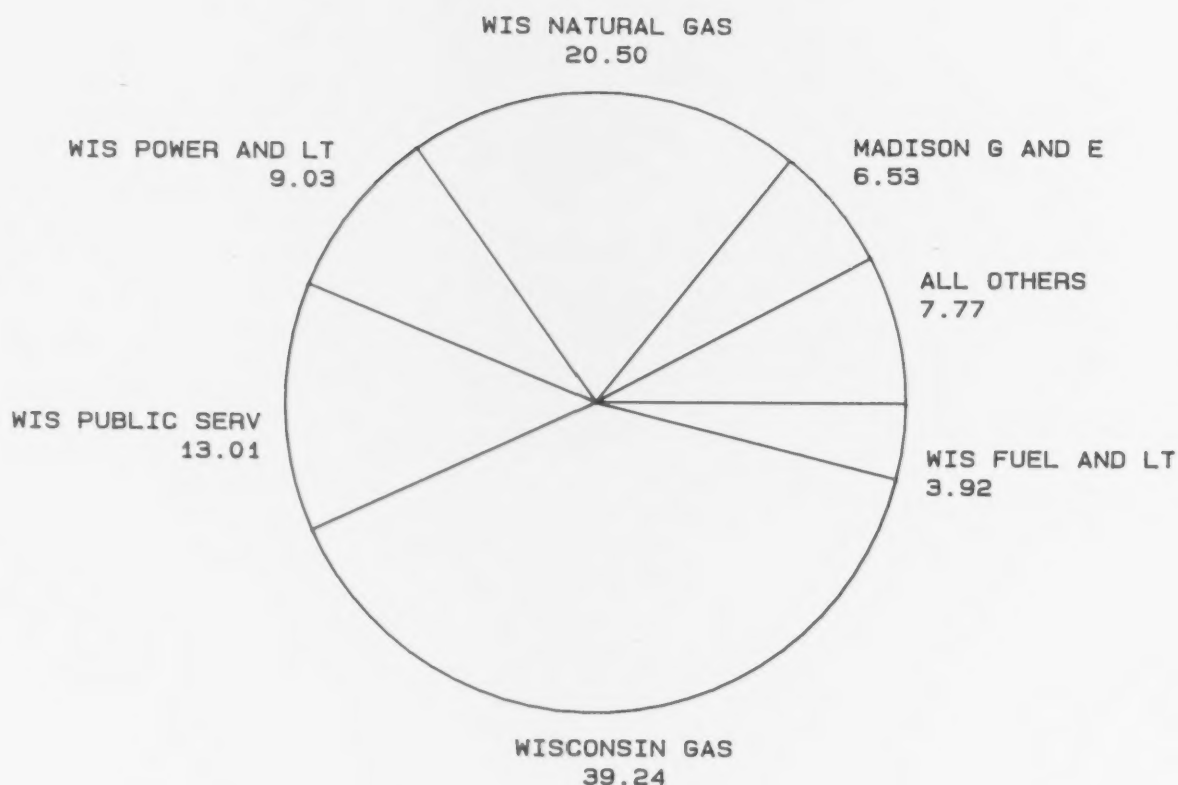


CHART 20
REVENUES OF WISCONSIN GAS UTILITIES
IN PERCENT OF TOTAL SALES TO ULTIMATE CONSUMERS
1986

SUM OF PERCENT BY UTILITY



Revenue and Consumption Ratios

The following table shows average revenue per therm, therms sold per customer and revenue per customer for each of the principle classes of service.

	1986	1985	1984
Revenue Per Therm (Cents)			
Residential - General	73.2	74.9	74.6
Residential - Space Heating	61.1	63.5	64.1
Commercial and Industrial - Firm	46.3	50.2	50.4
Commercial and Industrial - Interruptible	36.8	40.4	41.4
Commercial and Industrial - Space Heating	50.4	53.0	53.3
Therms Per Customer			
Residential - General	286	311	330
Residential - Space Heating	1,158	1,250	1,229
Commercial and Industrial - Firm	36,172	41,035	41,828
Commercial and Industrial - Interruptible	394,355	442,442	460,239
Commercial and Industrial - Space Heating	6,897	7,712	7,519
Revenue Per Customer			
Residential - General	\$ 209	\$ 233	\$ 247
Residential - Space Heating	708	794	788
Commercial and Industrial - Firm	16,751	20,605	21,082
Commercial and Industrial - Interruptible	145,007	178,808	190,349
Commercial and Industrial - Space Heating	3,473	4,091	4,009

Revenue per therm decreased for all classifications in 1986.

Therms sold per customer decreased for all consumer classifications.

Revenue per customers decreased for all classes of service. Charts 17, 18 and 19 presents a comparison of average residential spaceheating bills and consumption over a 9-year period.

Gas Utility Plant Statistics

Table 14 supplies a summary of operating and plant statistics of the gas utility industry in Wisconsin. Over 98.9% of the 2,608 million therms delivered to mains in 1986 was natural gas. Almost 20,000 miles of main were in service at the close of 1986, exclusive of that owned by the pipeline companies. This presents a 0.72% increase over a year earlier.

Data on Individual Utilities

Individual company statistics for 1986 are presented in Table 15. Chart 20 shows a breakdown by company of total sales to ultimate consumers. The Wisconsin Gas Company accounted for 39.2% of total sales revenue from ultimate consumers and the five largest utilities made up 88.3% of the total.

TABLE 12

COMPARATIVE STATEMENT OF REVENUES AND EXPENSES
WISCONSIN GAS UTILITIES 1/
1986-1984

	1986	1985	1984
Operating Revenues			
Sales to Ultimate Consumers	\$ 1,339,913,167	\$ 1,634,437,095	\$ 1,631,649,910
Sales to Other Gas Utilities	0	0	0
Total Sales of Gas	\$ 1,339,913,167	\$ 1,634,437,095	\$ 1,631,649,910
Other Operating Revenues	15,829,023	18,954,736	7,196,332
Total Operating Revenues	\$ 1,355,742,190	\$ 1,653,391,831	\$ 1,638,846,242
Operating Expenses			
Production			
Other Gas Expenses	\$ 329,885	\$ 339,477	\$ 297,991
Purchased Gas - Natural	981,166,767	1,259,750,117	1,269,065,441
Storage	706,193	697,277	857,918
Total Production Expense	\$ 982,202,845	\$ 1,260,786,871	\$ 1,270,221,350
Transmission and Distribution	59,452,887	58,445,191	56,941,492
Customer Accounts	54,707,911	51,772,557	44,205,162
Customer Services	26,480,653	25,373,056	18,034,844
Sales Promotion	3,722,098	3,761,945	2,623,394
Administrative and General	63,971,410	62,916,516	61,042,629
Total Operation and Maint.	\$ 1,190,537,804	\$ 1,463,056,136	\$ 1,453,068,871
Depreciation 2/	55,664,535	53,364,992	50,597,059
Taxes Other than Income Taxes	24,668,845	16,830,195	23,054,541
Income Taxes	27,807,934	47,200,470	43,061,346
Total Operating Expenses	\$ 1,298,679,118	\$ 1,580,451,793	\$ 1,569,781,817
Net Operating Revenues	\$ 57,063,072	\$ 72,940,038	\$ 69,064,425

1/ Excluding out-of-state operations except where noted.

2/ Including amortization of plant acquisition adjustments, conversion costs, and other utility plant not subject to charges for depreciation.

TABLE 13

SALES TO ULTIMATE CUSTOMERS BY CLASSES
WISCONSIN GAS UTILITIES 1/
1986-1984

	1986	1985	1984
Revenue from Gas Sold to Ultimate Consumers			
Residential - General	\$ 17,855,600	\$ 21,084,868	\$ 23,482,982
Residential - Space Heating	668,594,469	730,859,120	711,089,269
Commercial and Industrial Firm	139,769,007	177,180,289	188,152,967
Commercial and Industrial Interruptible	195,614,830	344,563,344	365,279,236
Commercial and Industrial Space Heating	312,339,530	355,805,111	337,384,982
Interdepartmental	5,739,731	4,944,363	6,260,474
Total	\$ 1,339,913,167	\$ 1,634,437,095	\$ 1,631,649,910
Therms of Gas Sold to Ultimate Consumers			
Residential - General 2/	24,407,578	28,137,189	31,474,544
Residential - Space Heating	1,094,464,962	1,150,580,797	1,108,761,854
Commercial and Industrial Firm	301,820,741	352,858,584	373,312,147
Commercial and Industrial Interruptible	531,985,466	852,585,986	883,198,540
Commercial and Industrial Space Heating	620,220,724	670,768,052	632,837,389
Interdepartmental	15,196,044	11,775,371	14,734,237
Total	2,588,095,515	3,066,705,979	3,044,318,711
Average Number of Customers			
Residential - General 2/	85,480	90,433	95,264
Residential - Space Heating	944,962	920,308	902,172
Commercial and Industrial Firm	8,344	8,599	8,925
Commercial and Industrial Interruptible	1,349	1,927	1,919
Commercial and Industrial Space Heating	89,921	86,978	84,161
Interdepartmental	8	8	8
Total	1,130,064	1,108,253	1,092,449

1/ Excluding out-of-state operations.

2/ The decline in residential consumption and customers is due to the transfer of residential customers to the space heating classification when gas furnaces are installed.

TABLE 14

OPERATING AND PLANT STATISTICS
WISCONSIN GAS UTILITIES 1/
1986-1984

	1986	1985	1984
Disposition of Gas Delivered to			
Mains (Therms)			
Gas Sold in Wisconsin			
To Ultimate Consumers	2,588,095,515	3,066,705,979	3,044,318,711
To Other Gas Utilities	0	0	0
Total	2,588,095,515	3,066,705,979	3,044,318,711
Gas Used by Company	6,168,688	6,128,920	6,237,808
Transport Gas Out	35,138,862	0	0
Total Sold, Used and			
Transported Gas	2,629,403,065	3,072,834,899	3,050,556,519
Gas Unaccounted for	11,553,996	(28,986,508)	5,844,868
Gas Delivered to Mains	2,640,957,061	3,043,848,391	3,056,401,387
Percentage of Gas Unaccounted for	0.44%	(0.95)%	0.19 %
Gas Produced (Therms)			
Liquefied Petroleum Gas	10,753	13,441	64,054
Natural Gas Purchased (Therms)			
From ANR Company	2,244,982,830	2,658,421,453	2,668,771,014
From Natural Gas Pipe Line Co.	74,498,140	76,589,234	78,304,160
From Midwest Gas Transmission			
Company	11,556,798	12,011,024	36,275,082
From Northern Natural Gas Co.	263,868,909	293,916,305	267,456,167
Other Gas Pipelines	13,218,906		
Total Natural Gas Purchase	2,608,125,583	3,040,938,016	3,050,806,423
Total Gas Produced & Purch	2,608,136,336	3,040,951,457	3,050,870,477
Net Inventory Change	(2,327,976)	2,896,934	5,530,910
Transport Gas In	35,148,701	0	0
Gas Delivered to Mains	2,640,957,061	3,043,848,391	3,056,401,387
Miles of Distribution and			
Transmission Mains 2/	20,042	19,898	19,636

1/ Excluding out-of-state operations.

2/ Not including transmission mains owned by pipeline companies.

TABLE 15

CONDENSED SUMMARY OF 1986 OPERATIONS
INDIVIDUAL GAS UTILITIES 1/

Utilities	Operating Revenue 2/	Operation and Maintenance	Depreciation and Amortization	Taxes Other Than Income Taxes	Income Taxes	Net Operating Revenues	Therms Sold 2/	Therms Produced	Therms Purchased 3/	Therms Produced & Purchased	Average Number of Customers 2/
Class A and B											
City Gas Co. of Antigo	\$ 4,084,212	\$ 3,785,985	\$ 111,767	\$ 83,394	\$ 8,571	\$ 94,495	8,135,007	0	7,812,200	7,812,200	3,500
Lake Superior District Power Co.	10,378,888	9,595,825	233,040	185,010	135,449	229,564	25,313,671	0	32,263,240	32,263,240	7,570
Madison Gas & Elec. Co.	88,572,394	75,185,440	5,063,539	1,540,205	1,583,053	5,200,157	158,054,699	0	166,355,180	166,355,180	74,848
Midwest Natural Gas Co.	4,061,506	3,641,861	107,202	79,339	109,900	123,204	9,353,038	0	9,522,940	9,522,940	3,872
Northern States Power Co.	33,235,751	29,486,655	1,867,322	646,105	333,415	902,254	73,263,738	0	77,072,543	77,072,543	33,574
Superior Water, Light & Power Co.	9,603,082	8,142,854	392,119	205,140	403,824	459,145	17,565,332	9,040	18,229,100	18,238,140	8,709
Wisconsin Fuel & Light Co.	53,085,175	48,512,354	1,421,840	1,062,754	833,346	1,254,881	121,299,450	0	119,255,070	119,255,070	38,794
Wisconsin Gas Company	531,970,348	462,594,778	20,508,093	10,081,731	12,256,345	26,529,401	999,113,486	0	997,570,048	997,570,048	420,180
Wisconsin Natural Gas Company	277,980,837	238,582,149	12,611,299	5,417,597	7,392,810	13,976,982	526,980,930	0	528,778,460	528,778,460	231,450
Wisconsin Power & Light Co.	122,387,257	111,186,425	5,666,173	2,291,842	1,383,355	1,859,462	215,787,100	0	245,331,097	245,331,097	106,784
Wisconsin Public Service Corp.	176,449,212	161,719,553	5,979,113	2,165,199	2,003,026	4,582,321	340,375,655	0	350,338,885	350,338,885	155,958
Wisconsin Southern Gas Co.	38,143,830	32,767,564	1,516,803	799,120	1,320,913	1,739,430	79,686,684	1,713	79,668,162	79,669,875	39,202
Subtotal	\$1,349,952,492	\$1,185,201,443	\$55,478,310	\$24,557,436	\$27,764,007	\$56,951,296	2,574,928,790	10,753	2,632,196,925	2,632,207,678	1,124,441
Class C & D 5/											
Elroy Gas, Inc.	636,468	597,722	16,773	20,735	(261)	1,499	1,143,268	0	1,111,240	1,111,240	490
Wauya Natural Gas Co. 4/	1,098,871	1,061,308	19,959	19,561	0	(1,957)	2,772,708	0	2,747,100	2,747,100	910
Natural Gas, Inc. St. Croix Valley	1,359,814	1,250,669	39,642	24,473	536	44,494	3,123,818	0	3,099,140	3,099,140	820
Natural Gas Co.	2,694,545	2,426,662	109,851	46,640	43,652	67,740	6,126,931	0	6,080,290	6,080,290	3,403
Subtotal	\$ 5,789,698	\$ 5,336,361	\$ 186,225	\$ 111,409	\$ 43,927	\$ 111,776	13,166,725	0	13,037,770	13,037,770	5,623
Total All Utilities	\$1,355,742,190	\$1,190,537,804	\$55,664,535	\$24,668,845	\$27,807,934	\$57,063,072	2,588,095,515	10,753	2,645,234,695	2,645,245,448	1,130,064

() Denotes Negative Figure.

1/ Data includes Wisconsin operations only.

2/ Includes Interdepartmental Sales and Sales for Resale.

3/ Out-of-state sales by Lake Superior District Power and Wisconsin Public Service Corporation were

4/ subtracted from the therms purchased figure to give an estimated figure for Wisconsin only.

5/ Municipally owned.

There are no Class D private gas utilities.

TELEPHONE UTILITY SUMMARY

Comparative statistics of telephone utilities in Wisconsin during the period 1984 -1986 are presented in this session. In addition, selected data over a 10-year period are presented in Chart 21. The coverage is summarized below:

Table 16 - Comparative Statement of Revenues and Expenses,
Wisconsin Telephone Utilities, 1986 -1984

Table 17 - Access Lines Served by Wisconsin Telephone
Utilities, 1986-1984

Table 18 - Condensed Summary of 1986 Operations, Individual
Telephone Utilities

Chart 21 - Comparison of Revenues and Expenses, Wisconsin
Telephone Utilities, 1977 -1986

Telephone Utility Revenues and Expenses

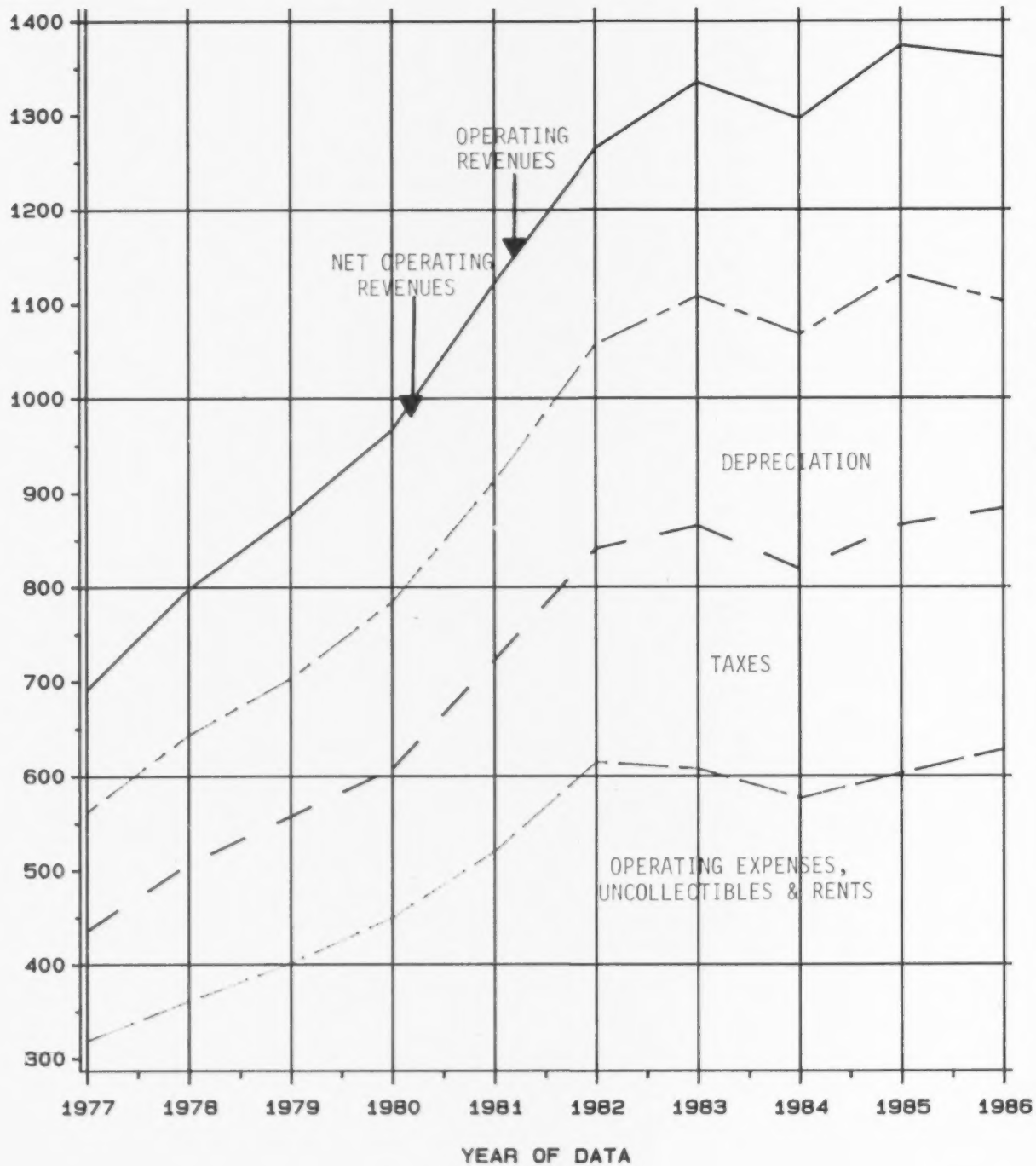
Table 16 shows that telephone revenues in Wisconsin decreased over \$13.1 million in 1986, or 1.0%. Total operating expenses were down about \$28.9 million, a 3.0% decrease. Net operating revenue rose about \$15.8 million or 6.5%.

Toll service revenues decreased 3.3% during the year. Local service revenues also decreased by 5.6%.

CHART 21

WISCONSIN TELEPHONE UTILITIES REVENUES AND EXPENSES

OMEXP



Access Line Data

Access Line data is presented in Table 17. About 2.3 million access lines were in service at the close of 1986. Approximately 77% are used by residential subscribers, 21% by business subscribers and 2% representing miscellaneous customers such as foreign exchange in and other common carrier connections.

Individual Companies

Table 18 presents individual company data for each of the 99 companies operating in the State. The Wisconsin Bell Company alone accounted for 67.6% of the revenues and served 66.8% of the customer access lines. General Telephone Company accounted for another 17.3% of the total revenues and served 15.0% of the access lines.

TABLE 16
COMPARATIVE STATEMENT OF REVENUES AND EXPENSES
WISCONSIN TELEPHONE UTILITIES
1986-1984

	1986	1985	1984
Operating Revenues			
Exchange Service Revenue	\$ 574,947,490	\$ 609,402,753	\$ 624,479,586
Access Revenues	445,252,064	416,049,202	2/
Toll Service Revenue	203,880,795	210,937,686	287,663,993
Miscellaneous Operating Rev.	136,990,323	137,736,807	384,174,896
Total Operating Revenues	\$ 1,361,070,672	\$ 1,374,126,448	\$ 1,296,318,475
Operating Expenses			
Maintenance Expense	\$ 248,402,090	\$ 247,294,992	\$ 228,706,747
Traffic Expense	37,471,410	38,195,222	36,189,455
Commercial Expense 1/	115,873,147	109,154,640	110,287,134
General and Miscellaneous Exp.	211,648,730	194,148,593	189,067,219
General Services and Licenses	14,916,310	14,204,033	12,027,627
Total Operation and Maintenance	\$ 628,311,687	\$ 602,997,480	\$ 576,278,182
Depreciation and Amortization	218,560,598	264,969,079	248,355,674
Taxes Other Than Income Taxes	0	0	116,103,295
Income Taxes 3/	255,478,208	263,285,178	126,627,382
Total Operating Expenses	\$ 1,102,350,493	\$ 1,131,251,737	\$ 1,067,364,533
Net Operating Revenue	\$ 258,720,179	\$ 242,874,711	\$ 228,953,942

1/ Includes uncollectible accounts.

2/ Access Revenues were included in other revenues for 1984 and 1983.

3/ Taxes Other Than Income Taxes included.

TABLE 17

CUSTOMER ACCESS LINES SERVED BY WISCONSIN
TELEPHONE COMPANIES
1986-1984

	December 31, 1986 -----	December 31, 1985 -----	December 31, 1984 -----
Residential	1,764,956	1,737,593	1,721,264
Business 1/	490,842	456,398	457,409
Miscellaneous 2/	29,974	34,706	37,294
	-----	-----	-----
Total Access Lines	2,285,772	2,228,697	2,215,967

1/ Includes pay and mobile lines.

2/ Includes foreign exchange in and other common carrier connections.

TABLE 18
A SUMMARY OF 1986 OPERATIONS
FOR INDIVIDUAL TELEPHONE UTILITIES

Utility	Operating Revenue	Operation and Maintenance	Depreciation and Amortization	Taxes	Total Operating Expense	Net Operating Income	Access Lines in Use
Amery Telephone Company	1718775.42	756221.69	430133.23	189017.09	1375372.01	343403.41	4498
Amherst Telephone Company	1395156.91	460115.03	336993.78	174599.72	971708.53	423448.38	3215
Badger State Telephone Company, Inc.	1688051.41	910471.06	277803.80	238487.19	1426762.05	261289.36	3691
Baldwin Telecom, Inc.	1145542.00	516026.00	218237.00	151912.00	886176.00	259367.00	2671
Bayland Telephone Inc.	590420.22	260359.55	106218.26	71267.50	437845.31	152574.91	1190
Belmont Telephone Company	308421.04	123839.57	62466.61	39905.64	226211.82	82209.22	687
Bergen Telephone Company	137765.30	75020.10	15889.10	26643.21	117552.41	2012.89	158
Black Earth Telephone Company	459299.31	236111.44	50331.01	92623.18	379065.63	80233.68	1050
Bloomer Telephone Company	962955.52	338514.30	233567.36	169579.55	751661.21	211294.31	2505
Bonduel Telephone Company	585553.33	339856.98	82649.34	78901.21	501407.53	64145.80	1404
Bruce Telephone Company, Inc.	903204.16	299650.46	154533.81	120519.28	584703.55	318500.61	1248
Burlington Brighton & Wheatland Tel	1075699.05	602456.28	176109.92	138215.23	916781.43	158917.62	2578
Casco Telephone Company	448167.70	228987.97	128877.79	35914.10	393779.86	54387.84	987
Cencom of Wisconsin, Inc.	10823108.00	4899744.00	2417838.00	1518412.00	8835994.00	1987114.00	20196
Central State Telephone Company	3290098.17	1600211.66	633809.31	495251.58	2729272.55	560825.62	6587
Century Telephone of Wis., Inc.	25982440.88	11421194.49	6115674.39	4208100.84	21744969.72	4237471.16	41627
Chiquamegon Telephone Coop Inc.	2905394.61	1112504.18	928641.04	240923.08	2282068.30	623326.31	5192
Chibardun Telephone Cooperative Inc	1815334.59	875214.13	469930.25	134947.48	1480091.86	335242.73	4254
Citizens Telephone Cooperative Inc	617488.65	226423.74	176456.10	35700.17	438580.01	178908.64	1531
Clear Lake Telephone Company, Inc	462845.43	284602.62	98904.44	32306.24	415813.30	46832.13	1151
Cochrane Cooperative Telephone Co	398432.00	170844.00	95649.00	26913.00	293406.00	105026.00	1003
Coon Valley Farmers Telephone Co	549402.60	240341.02	100469.35	97265.08	438065.45	111337.15	1807
Grandon Telephone Company	1105261.18	462899.20	307276.46	67535.20	837710.86	267550.32	2115
Cuba City Tel Exchange Co.	710103.65	338101.00	144352.20	99768.89	582222.09	127881.56	1415
Dickeyville Telephone Corporation	682027.40	353513.41	114484.83	70091.01	538089.25	143938.15	897
Dodge County Telephone Company	370703.38	222858.19	66090.50	44174.03	333122.72	37580.66	863
Fairwater Brandon Alto Telephone Co	543768.85	265764.08	121030.34	43081.06	429875.48	113893.37	1107
Farmers Independent Telephone Co	843317.16	347164.27	212316.45	123132.00	682612.72	160704.44	2101
Farmers Telephone Company	2213250.90	746403.73	506321.06	340630.89	1593355.68	61895.22	5078
Fennimore Telephone Company	585139.37	359573.00	93428.50	58515.20	511516.70	73622.67	1524
Footville Telephone Company	376307.16	197737.46	71918.99	13844.52	283500.97	92806.19	753
Forestville Telephone Company, Inc	739799.77	265516.27	91613.84	193721.60	550851.71	188948.06	1694
General Telephone Co of Wisconsin	235244966.00	101782121.00	49279676.00	39409037.00	190470834.00	44774132.00	343861
Greenwood Telephone Company	534015.36	334166.10	107236.00	52688.95	494091.05	39924.31	1286
Hager City Telephone Company	752021.00	413158.00	211074.00	58958.00	683190.00	68831.00	1600
Headwaters Telephone Company	2564317.10	572096.39	719519.66	459025.40	1750641.45	813675.65	3618
Hillsboro Telephone Company Inc	578651.66	287775.58	119190.70	44305.56	451271.84	127379.82	1381
Indianhead Telephone Co.	938646.49	329228.54	247607.37	141285.26	718121.17	220525.32	1544
La Valle Telephone Cooperative, Inc	504409.16	242966.38	177566.09	33449.63	453982.10	50427.06	1438
Lakefield Telephone Company	643205.17	252613.96	161687.33	68988.79	483290.08	159915.09	1211

TABLE 18
A SUMMARY OF 1986 OPERATIONS
FOR INDIVIDUAL TELEPHONE UTILITIES

Utility	Operating Revenue	Operation and Maintenance	Depreciation and Amortization	Taxes	Total Operating Expense	Net Operating Income	Access Lines in Use
Lakeshore Telephone Company	568480.07	352906.36	102099.00	50586.07	505591.43	62888.64	1468
Larsen-Readfield Telephone Company	704249.18	324581.37	135503.04	114730.85	574815.26	129433.92	1865
Lesonweir Valley Telephone Company	1285032.49	524755.51	298414.03	167940.65	991110.19	273922.30	2319
Luck Telephone Company	667382.93	285086.19	156547.26	87813.57	529447.02	137935.91	1688
Madeline Island Telephone Company	128497.93	111391.03	11763.89	7160.57	130315.49	-1817.56	231
Manawa Telephone Company, Inc.	906783.47	444615.28	193405.45	74859.50	712880.23	193903.24	1775
Maple Telephone Cooperative, Inc.	116267.78	40552.40	13723.34	7922.72	62198.46	54069.32	285
Marquette Adams Telephone Coop Inc	1109945.46	452122.76	244378.85	76078.77	772580.38	337365.08	2373
Mid-Plains Telephone Incorporated	6087481.00	2562566.00	1164063.00	1048405.00	4775034.00	1312447.00	14229
Midway Telephone Company	2781603.35	1166548.30	479447.83	525676.65	2171672.78	509930.57	5866
Milltown Mutual Telephone Company	631001.04	332688.69	190193.20	32255.91	55137.80	75863.24	1695
Mondovi Telephone Company	1118825.86	537001.36	159068.75	164694.36	86764.47	258061.39	2070
Monroe County Telephone Company	3292048.71	1675377.50	611169.19	347921.34	263468.03	657580.68	7979
Mosel Centerville Telephone Company	1167101.16	609224.36	25440.56	139011.69	1004676.61	162424.55	2716
Mosinee Telephone Company	1602744.17	696860.76	366988.50	250122.29	1313971.55	288772.62	3311
Mount Horeb Telephone Company	1810318.25	625650.61	383289.79	308749.33	1317689.73	492628.52	2672
Mount Vernon Telephone Company	2081281.58	1035677.71	301515.92	382578.80	1719772.43	361509.15	4608
Nelson Telephone Cooperative	1601789.50	647348.93	356703.46	130823.59	1134875.98	466913.52	3194
Niagara Telephone Company	1396082.62	634945.05	227982.71	206997.82	1069925.58	326157.04	2917
North-West Telephone Company	27071233.79	11345603.01	581106.98	3546120.52	20702830.51	6368403.28	49652
Northeast Telephone Company	1898311.37	721367.88	566090.09	172051.25	1459509.22	438802.15	4289
Novys Telephone Company	161343.48	100814.08	25411.15	0.00	126225.23	35118.25	701
Peoples Telephone Co (Mount Hope)	733721.69	376839.61	129683.86	117037.79	623561.26	110160.43	1598
Peoples Telephone Co, The (Randolph)	2793674.64	967808.85	790571.05	274448.04	2032827.94	760846.70	5178
Platteville Telephone Company	3931849.92	1561442.53	668132.04	714266.90	2943841.47	988008.45	7240
Price County Telephone Company	1625509.93	625939.29	325772.57	246076.70	1197788.56	427721.37	3125
Rhineland Telephone Company	4186367.28	1899234.12	960148.35	652435.83	351181.30	674548.98	9920
Rib Lake Telephone Company	376402.81	233294.16	113909.60	4013.25	351217.01	25185.80	1035
Richland Grant Telephone Cooperative	1001423.73	450895.61	289522.16	71019.49	811437.26	189866.47	2159
Rock River Telephone Company	721953.31	378400.57	108567.12	105080.47	592048.16	129905.15	1337
Scandinavia Telephone Company	1001892.36	453172.75	145092.52	197969.51	796234.78	205657.53	1793
Sharon Telephone Company	570229.96	358332.81	52546.46	81980.65	492859.92	77370.04	888
Shell Lake Telephone Company	624505.78	306335.66	158272.51	62979.94	527588.11	96917.67	1713
Siren Telephone Company Incorporated	548848.24	271451.44	126798.36	66728.58	464978.08	83870.16	1664
Solon Springs Telephone Company	5551471.55	2425338.39	988716.37	980007.56	4394062.32	1157409.23	12825
Somersett Telephone Company, Inc.	567280.09	260599.51	120044.47	60079.65	440723.63	126556.46	1103
Southeast Telephone Co of Wisc., Inc	2446742.50	1193136.70	415989.53	319347.81	1928474.04	518268.46	5115
Spring Valley Telephone Company, Inc	332389.84	198396.38	59676.10	30967.54	228940.02	43449.82	784
St Croix Telephone Company	2741149.00	838300.00	349542.00	789933.00	1977775.00	763374.00	4959
State Long Distance Telephone Co	3224553.04	1515469.72	633683.47	568579.83	2617733.02	606820.02	5412

TABLE 18
A SUMMARY OF 1986 OPERATIONS
FOR INDIVIDUAL TELEPHONE UTILITIES

Utility	Operating Revenue	Operation and Maintenance	Depreciation and Amortization	Taxes	Total Operating Expense	Net Operating Income	Access Lines in Use
Stockbridge & Sherwood Telephone Co	1063351.33	557552.35	208885.49	157564.57	924002.41	139348.92	2102
Sullivan Telephone Company	462179.52	264300.79	149018.48	7592.55	420911.82	41267.70	1477
Tenney Telephone Company	307864.51	217255.84	50500.07	25986.83	293742.74	14121.77	869
Thorpe Telephone Company	873169.66	480060.71	125412.60	113811.97	719285.28	153884.38	1823
Tri-County Telephone Coop. Inc	1451107.51	721271.64	326018.78	99107.72	1146398.14	304709.37	3192
Turtle Lake Telephone Company Inc	459860.53	250483.09	87717.10	35339.67	373539.86	86320.67	1097
Union Telephone Company	1756756.94	585276.02	461676.65	214495.27	1261447.94	495309.00	3071
United Telequipment Corporation	6274714.00	2733834.00	1124282.00	582910.00	4441026.00	1833688.00	12334
Universal Tel Co of Northern Wis Inc	4447138.63	1898478.34	746505.54	828956.86	3473940.74	973197.89	10344
Urban Telephone Corporation	5923738.32	2829095.08	832089.79	1094953.76	4756138.63	1167599.69	14850
Valders Telephone Company	824027.48	432890.11	169723.44	114722.77	717336.32	106691.16	1749
Vernon Telephone Cooperative	2162780.54	945960.88	359665.55	176382.39	1482008.82	680771.72	5154
Viroqua Telephone Company	1694016.54	945075.49	260728.90	265446.95	1471251.34	222765.20	2941
Waunakee Telephone Company Inc	1443523.68	643575.53	293837.92	258187.45	1195600.90	247922.78	3232
Wayside Telephone Company	498946.00	304206.00	100280.00	36112.00	440598.00	58348.00	1143
West Wisconsin Telephone Coop. Inc	2068625.76	670809.88	512660.39	159013.96	1342484.23	726141.53	3354
Wisconsin Bell, Inc.	920124101.00	436177673.00	126389651.00	186726202.00	749293526.00	170830575.00	1527056
Wittenberg Telephone Company	806355.34	360122.70	188962.33	79988.17	629073.20	177282.14	1690
Wood County Telephone Company	9107377.00	3989325.00	1707534.00	1676352.00	7373211.00	1734166.00	19827
Total (1)	1361070762.00	628311687.00	218560598.00	255478208.00	1102350493.00	258720179.00	2285772

(1) Data for individual utilities may not add to the totals due to rounding.

WATER UTILITIES

Comparative statistics of water utilities operating in Wisconsin during the period from 1984 through 1986 are presented in this section. Chart 22 shows a summary of the income account over a ten-year period. The coverage is summarized below:

- Table 19 - Comparative Statement of Revenue and Expenses
Wisconsin Water Utilities, 1986 - 1984.
- Table 20 - Operating and Plant Statistics, Wisconsin Water
Utilities, 1986 - 1984.
- Table 21 - Condensed summary of 1986 Operations, Individual
Water Utilities
- Chart 22 - Comparison of Revenues and Expenses, Wisconsin
Water Utilities, 1977-1986.

Water Utility Revenues and Expenses

Chart 22 shows that revenues and expenses advanced steadily over the past nine years. Taxes are up 73.7% for the period while operation and maintenance expenses are up 83.3%, depreciation rose 61.8%, operating revenues rose 88.1% and net operating revenue increased 168.7%.

Revenues increased 2.1% and operating expenses were up 5.4% during 1986. Net operating revenue decreased 13.1%.

Operating and Plant Statistics

The total number of water customers served increased 1.2% in 1986. Gallons of water pumped was up 2.0%. Electric pumpage accounted for 100.0% of the total. Total miles of main increased 0.4%.

Data on Individual Utilities

Table 21 shows selected data on each Class A and B water utility, all but two of which are municipally owned. The table also shows totals for the smaller utilities. Municipal utilities accounted for 96.4% of the total operating revenue and served 97.3% of the customers. Superior, served by Superior Water, Light, and Power Company, and Beloit and Ripon served by Wisconsin Power and Light Company, were the largest cities served by private utilities.

CHART 22

WISCONSIN WATER UTILITIES REVENUES AND EXPENSES

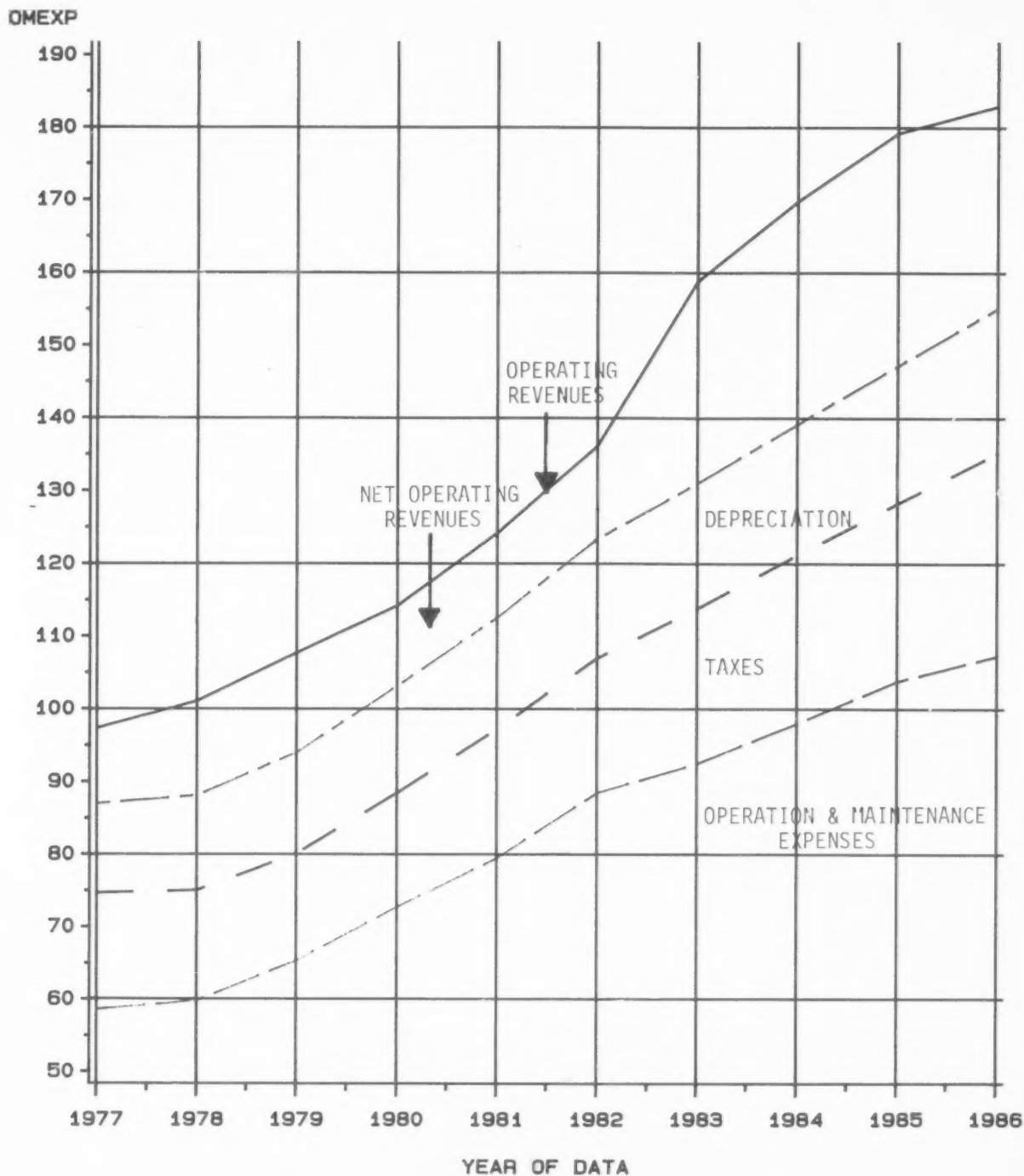


TABLE 19

COMPARATIVE STATEMENT OF REVENUES AND EXPENSES
WISCONSIN WATER UTILITIES
1986-1984

	1986	1985	1984
All Water Utilities			
Operating Revenues			
Sales to General Consumers	\$ 134,477,498	\$ 132,448,558	\$ 125,441,108
Interdepartmental Sales	132,906	128,218	285,070
Sales to Other Water Utilities	4,698,036	4,684,670	4,074,089
Fire Protection and Other			
Municipal Sales	39,923,610	38,669,886	36,877,050
Total Sales of Water	\$ 179,232,050	\$ 175,931,332	\$ 166,677,317
Miscellaneous Operating Revenue	3,709,867	3,311,272	3,103,955
Total Operating Revenues	\$ 182,941,917	\$ 179,242,604	\$ 169,781,272
Operating Expenses			
Source of Water Supply			
(Excluding Purchases)	\$ 1,664,306	\$ 2,133,479	\$ 1,448,715
Water Purchases	5,835,915	4,891,064	5,218,435
Pumping Expenses	26,134,808	25,449,623	25,019,042
Purification	13,945,457	13,780,076	13,085,271
Total Production Expense	\$ 47,580,486	\$ 46,254,242	\$ 44,771,463
Transmission and Distribution	27,785,388	27,947,303	25,558,773
Customer Accounts	7,226,240	7,053,860	6,471,449
Sales	21,121	2,234	70
Administrative and General Expenses	24,672,531	22,543,040	21,185,936
Total Operation and			
Maintenance Expense	\$ 107,285,766	\$ 103,800,679	\$ 97,987,691
Depreciation and Amortization	19,932,315	18,948,679	17,990,044
Taxes Other Than Income Taxes	27,491,522	23,845,664	22,600,179
Income Taxes	413,115	632,060	575,312
Total Operating Expenses	\$ 155,122,718	\$ 147,227,082	\$ 139,153,226
Net Operating Revenues	\$ 27,819,199	\$ 32,015,522	\$ 30,628,046

TABLE 19 (Concluded)

COMPARATIVE STATEMENT OF REVENUES AND EXPENSES
WISCONSIN WATER UTILITIES
1986-1984

	1986	1985	1984
	-----	-----	-----
Private Water Utilities			

Total Operating Revenues	\$ 6,525,523	\$ 6,603,928	\$ 6,183,253
Operation and Maintenance	3,644,593	3,698,804	3,364,993
Depreciation and Amortization	703,452	662,635	631,276
Taxes Other Than Income Taxes	406,943	298,463	481,471
Income Taxes	413,115	632,060	575,312
	-----	-----	-----
Total Operating Expenses	\$ 5,168,103	\$ 5,291,962	\$ 5,053,052
Net Operating Revenues	\$ 1,357,420	\$ 1,311,966	\$ 1,130,201
Municipal Utilities			

Total Operating Revenues	\$176,416,394	\$172,638,676	\$163,598,019
Operation and Maintenance	103,641,173	100,101,875	94,622,698
Depreciation and Amortization	19,228,863	18,286,044	17,358,768
Taxes Other Than Income Taxes	27,084,579	23,547,201	22,118,708
	-----	-----	-----
Total Operating Expenses	\$149,954,615	\$141,935,120	\$134,100,174
Net Operating Revenues	\$ 26,461,779	\$ 30,703,556	\$ 29,497,845

TABLE 20
OPERATING AND PLANT STATISTICS
WISCONSIN WATER UTILITIES
1986-1984

	1986	1985	1984
Average Number of Customers			
Residential	873,861	864,153	856,722
Commercial	95,686	93,464	92,255
Industrial	7,597	7,825	7,683
Total	977,144	965,442	956,660
Private Utilities	26,955	26,941	26,873
Municipal Utilities	950,189	938,501	929,787
Total	977,144	965,442	956,660
Gallons of Water Pumped Into Distribution System (000 Omitted)			
Electric	189,109,940	184,658,073	183,904,431
Internal Combustion	0	20,948	16,121
Steam	0	0	0
Purchased	13,108,519	13,490,825	12,905,705
Total	202,218,459	198,169,846	196,826,257
Private Utilities	4,308,307	4,391,391	4,493,513
Municipal Utilities	197,910,152	193,778,455	192,332,744
Total	202,218,459	198,169,846	196,826,257
Miles of Distribution Main on December 31			
Private Utilities	362	363	363
Municipal Utilities	13,874	13,821	13,753
Total	14,236	14,184	14,116

TABLE 21
CONDENSED SUMMARY OF 1986 OPERATIONS
INDIVIDUAL WATER UTILITIES

Utilities	Operating Revenues	Operation and Maintenance	Depreciation and Amortization	Taxes Other Than Income Taxes	Income Taxes	Total Operating Expenses	Net Operating Revenues	Average Number of Customers 1/
Private Utilities Class A & B								
Superior Water, Light & Power Co. (SWLP)	\$ 2,514,304	\$ 1,408,635	\$ 169,528	\$ 188,962	\$ 120,361	\$ 1,947,486	\$ 566,818	9,376
Wisconsin Power & Light Co. (WPL)	3,745,463	1,972,382	498,523	202,633	291,980	2,965,518	779,945	16,028
Subtotal	\$ 6,259,767	\$ 3,441,017	\$ 668,051	\$ 391,595	\$ 412,341	\$ 4,913,004	\$ 1,346,763	25,404
11 Class D Water Utilities 2/	265,756	203,576	35,401	15,348	774	255,099	10,657	1,764
Total Private Utils.	\$ 6,525,523	\$ 3,644,593	\$ 703,452	\$ 406,943	\$ 413,115	\$ 5,168,103	\$ 1,357,420	27,168
Municipal Utilities Class A								
Appleton	\$ 3,456,670	\$ 2,194,377	\$ 257,784	\$ 454,572	\$ 0	\$ 2,906,733	\$ 549,937	21,239
Gudaby	1,280,324	704,559	125,000	220,310	0	1,049,869	230,465	5,185
Eau Claire	3,181,493	1,547,405	297,442	505,818	0	2,350,665	830,828	18,660
Fond du Lac	1,647,471	1,164,960	172,110	184,953	0	1,522,023	125,448	12,369
Glendale	1,017,611	677,318	118,321	118,603	0	914,242	103,369	4,489
Green Bay	4,718,059	2,454,180	559,239	597,068	0	3,610,467	1,107,592	31,427
Janeville	1,768,092	804,858	186,134	288,341	0	1,279,333	488,759	17,458
Kaukauna	636,317	382,554	70,172	105,647	0	558,373	77,944	3,949
Kenosha	4,024,851	2,631,548	416,555	558,026	0	3,606,129	418,722	23,362
La Crosse	2,085,881	1,296,666	180,074	358,364	0	1,835,104	250,777	15,141
Madison	7,872,671	4,566,482	780,221	1,176,562	0	6,523,265	1,349,406	48,069
Manitowoc	2,308,581	1,224,984	193,558	273,749	0	1,692,291	616,290	11,300
Marinette	1,026,706	651,720	88,905	141,996	0	882,621	144,085	4,670
Marshfield	761,647	515,537	68,496	106,824	0	690,857	70,790	6,300
Milwaukee	36,142,379	22,149,646	2,868,009	5,432,479	0	30,450,134	5,692,245	182,480
Neenah	1,354,077	918,988	135,240	197,591	0	1,251,819	102,258	8,532
Oshkosh	2,542,810	1,499,838	253,220	381,264	0	2,134,322	408,488	17,667
Racine	5,580,765	3,387,587	502,228	613,559	0	4,503,374	1,077,391	28,376
Sheboygan	2,181,171	1,363,796	137,036	301,004	0	1,801,836	379,335	16,773
South Milwaukee	937,882	682,557	62,621	136,416	0	881,594	56,288	5,859
Waukesha	3,480,945	2,085,961	370,826	514,504	0	2,971,291	509,654	13,477
Wausau	1,721,250	1,111,574	168,452	274,916	0	1,554,944	166,306	12,066
Wauwatona	2,957,706	2,179,787	188,455	394,485	0	2,762,727	194,979	15,636
West Allis	3,062,580	2,501,546	203,635	416,346	0	3,121,527	(58,947)	19,038
Wisconsin Rapids	1,454,809	821,174	116,433	255,662	0	1,193,269	261,540	6,897
Subtotal	\$ 97,202,748	\$ 59,519,584	\$ 8,520,166	\$ 14,009,059	\$ 0	\$ 82,048,809	\$ 15,153,939	530,419

TABLE 21 (Concluded)
CONDENSED SUMMARY OF 1986 OPERATIONS
INDIVIDUAL WATER UTILITIES

Utilities	Operating Revenues	Operation and Maintenance	Depreciation and Amortization	Taxes Other Than Income Taxes	Income Taxes	Total Operating Expenses	Net Operating Revenues	Average Number of Customers 1/
Municipal Utilities (Continued)								
Class B								
Allouez	\$ 771,497	\$ 491,551	\$ 70,581	\$ 78,244	0	\$ 640,376	\$ 131,121	4,777
Ashland	562,383	399,913	33,809	94,104	0	527,826	34,557	2,832
Beaver Dam	666,086	581,789	66,056	94,348	0	742,193	(76,107)	5,346
Brown Deer	699,486	468,207	70,646	117,181	0	656,034	43,452	3,397
Cedarburg	455,889	224,654	70,319	74,952	0	369,925	85,964	2,835
Chippewa Falls	1,019,440	590,723	91,558	163,454	0	845,735	173,705	4,492
De Pere	694,251	444,644	89,083	142,718	0	676,445	17,806	5,110
Greendale	681,389	518,010	62,209	112,247	0	692,466	(11,077)	4,566
Menasha, Inc. S.D. 4	1,016,961	581,283	151,272	13,115	0	745,670	271,291	4,286
Menasha, City	1,921,932	1,264,578	100,505	164,395	0	1,529,478	392,454	4,958
Menomonee Falls	1,008,603	506,837	118,655	205,686	0	831,178	177,425	5,220
New Berlin	1,585,027	684,455	255,786	448,055	0	1,388,296	196,731	4,524
New London	374,016	265,259	28,776	48,672	0	342,707	31,309	2,409
Oak Creek	2,349,794	843,002	362,634	584,815	0	1,790,451	559,343	3,816
Oconomowoc	663,915	400,378	88,572	102,092	0	591,042	72,873	3,297
Platteville	498,535	323,813	57,758	91,748	0	473,319	25,216	2,631
Plymouth	467,096	351,399	26,886	57,333	0	435,618	31,478	2,258
Port Washington	807,580	508,904	85,498	141,108	0	735,510	72,070	3,015
Rib Mountain	141,004	100,120	102,824	2,128	0	205,072	(64,068)	1,225
River Falls	295,650	231,063	29,605	46,358	0	309,026	(13,376)	2,455
Shawano	376,037	193,812	45,914	62,571	0	302,297	73,740	3,014
Shorewood	517,152	469,168	16,778	32,634	0	518,580	(1,428)	3,559
Stevens Point	779,800	468,710	85,887	165,197	0	719,794	60,006	6,977
Sturgeon Bay	926,367	362,348	96,996	167,367	0	626,711	299,656	3,600
Sun Prairie	520,395	269,865	51,677	92,264	0	413,806	106,589	4,239
Tonahawk	273,057	136,525	29,869	51,929	0	218,323	54,734	1,255
Two Rivers	605,780	432,721	60,114	93,801	0	586,636	19,144	4,651
Waterloo	118,297	55,328	9,401	17,896	0	82,625	35,672	849
Watertown	905,839	446,285	99,140	136,969	0	682,394	223,445	5,854
Waupaca	466,380	197,107	51,138	65,475	0	313,720	152,660	1,916
Waupun	405,791	386,743	39,722	47,279	0	473,744	(67,953)	2,829
West Bend	1,069,961	590,929	132,381	193,967	0	917,267	152,694	6,673
Whitefish Bay	579,691	330,924	68,118	49,769	0	448,811	130,880	4,791
Subtotal	\$ 24,225,081	\$ 14,121,047	\$ 2,750,167	\$ 3,961,861	0	\$ 20,833,075	\$ 3,392,006	123,656
Class C 129 Utilities	35,534,746	19,242,602	4,698,183	5,685,006	0	29,625,791	5,908,955	191,375
Class D 354 Utilities	19,453,819	10,757,940	3,260,347	3,428,653	0	17,446,940	2,006,879	120,107
Total Municipal Utls.	\$176,416,394	\$103,641,173	\$ 19,228,863	\$ 27,084,579	0	\$149,954,615	\$ 26,461,779	965,557
Total All Utilities	\$182,941,917	\$107,285,766	\$ 19,932,315	\$ 27,491,522	\$ 413,115	\$155,122,718	\$ 27,819,199	992,725

1/ Includes fire protection, public authorities, interdepartmental and other water utility retail customers.

2/ There were no private Class C utilities in 1984.

3/ () Denotes negative figure.

STEAM AND HOT WATER HEATING UTILITY SUMMARY

As shown in Table 22, steam and hot water heating utility operations in Wisconsin are not very extensive. Only two utilities rendered this service in 1986.

The Wisconsin Electric Power Company, operating in the city of Milwaukee, has by far the largest heating utility in the State, serving 518 customers at the close of 1986. Its net operating revenue for the year was \$1,258,926.

The other community in which heating service was supplied during the year was Waterloo, served by a municipal utility. Waterloo had a gain of \$1,046 for 1986.

TABLE 22

COMPARATIVE STATEMENT OF REVENUES, EXPENSES
AND STATISTICS FOR WISCONSIN STEAM AND HOT WATER
HEATING UTILITIES
1986-1984

	1986	1985	1984
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Operating Revenues	\$ 11,966,842	\$ 12,142,297	\$ 12,322,975
Operation and Maintenance	8,789,258	9,046,722	8,605,293
Depreciation	897,038	770,925	763,332
Taxes	1,020,574	1,013,093	1,416,364
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Total Operating Expenses	\$ 10,706,870	\$ 10,830,740	\$ 10,784,989
Net Operating Revenues	\$ 1,259,972	\$ 1,311,557	\$ 1,537,986
Number of Customers	578	587	686